PONY

سلسلة كتب الاستاذ

2024

ICT

Information and Communication Technology

6th Primary

First Term

By

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Contents



Spotlight on Theme 1

In this theme, you will learn about the mechanisms to deal with ICT (Information and Communication Technology) in order to cope with the latest technological developments.

This includes identifying the operating systems for devices, such as mobile devices and PCs.

You will also create the concept and plan a website that promotes a cutting-edge assistive technology product.



Lesson 1 Explorer in Action

Mr. Kartik Sawhney



- Mr. Kartik Sawhney is a National Geographic Explorer and a computer expert.
- He uses technology to empower people of determination.
- He earned his Bachelor's and Master's degrees in Computer Science at Stanford University, California, in the USA.
- His studies focused on:
  1. Artificial intelligence (AI).
  2. Human-computer interaction.

• السيِّد كارتيك ساوهني هو مستكشف نشط في ناشونال جيوجرافيك، وهو خبير بالكمبيوتر.
• يَستخدم ساوهني التكنولوجيا لتمكين الأشخاص من ذوي الهمم.
• حصل على شهادتَي البكالوريوس والماجستير في علوم الكمبيوتر من جامعة ستانفورد بكاليفورنيا في الولايات المتحدة الأمريكية.
• وقد ركَّزت دراسته على الذكاء الاصطناعي والتفاعل بين الإنسان وأجهزة الكمبيوتر.

- Mr. Sawhney creates applications that provide access to visual content for the blind and visually impaired.
- His app converts graphs into audio frequencies, allowing the listener to hear the difference in information in the graph.
- He has worked on projects with over 20 universities and corporations and has impacted over 12,000 people of determination worldwide.
- For his outstanding work, he has received national and international awards, including:
  1. The Queen's Young Leaders Award
  2. The UN Young Leader's Award

• يبتكر السيِّد ساوهني تطبيقات تسمح للأشخاص المكفوفين وضعاف البصر بالوصول إلى المحتوى المرئي.
• يقوم تطبيقه بتحويل الرسوم البيانية إلى تردُّدات صوتية؛ مما يسمح للمستمع أن يسمع الاختلاف في المعلومات بالرسم البياني.
• وقد عمِل على مشاريع مع أكثر من ٢٠ جامعة ومؤسَّسة، وأثَّر على أكثر من ١٢٠٠٠ شخص من ذوي الهمم حول العالم.
• ونتيجة لعمله المتميِّز، حاز على جوائز محلية وعالمية، ومنها: جائزة الملكة للقادة الشباب، وجائزة الأمم المتحدة للقادة الشباب.

Theme 1



How does Mr. Sawhney help people of determination?

» There are over one billion people of determination worldwide. To help them, Mr. Sawhney co-founded istemai.com.

» I-Stem (istemai.com): It's a platform that provides software that changes digital texts into a format that can be easily used by the blind and visually impaired.

❶ A person who can't read a text might upload that text to the I-Stem website.

❷ The software converts the file into a Word document.

❸ A few minutes later, the person receives the converted document and listens to the text using a screen reader, which automatically reads the text aloud.

• يوجد أكثر من مليار شخص من ذوي الهمم حول العالم. ولكي يساعدهم شارك ساوهني في تأسيس I-Stem (استماعي).

• I-Stem: هي منصَّة تُقدِّم برنامجًا يُغيِّر النصوص الرقمية إلى صيغة يمكن استخدامها من قِبَلِ المكفوفين وضعاف البصر بسهولة.

❶ يمكن للشخص الذي لا يستطيع قراءة النص أن يُحمِّل ذلك النص إلى موقع I-Stem.

❷ يُحوِّل البرنامج الملف إلى مستند ببرنامج Word.

❸ بعد دقائق قليلة، يتلقَّى الشخص المستند المحوَّل ويستمع إلى النصّ باستخدام قارئ الشاشة الذي يقرأ النصّ بصوت عالٍ بصورة تلقائية.

Other benefits of I-Stem for people of determination:

» The I-Stem platform (istemai.com) also includes mentorship and employment opportunities for people of determination.

» This is achieved by working closely with governments, technical universities, and corporations.

» The platform is supported by UNICEF, Microsoft, and the National Geographic Society, among other partner organizations. This makes it easier for people of determination to access the services and venues of the organizations.

• تتضمَّن منصَّة I-Stem أيضًا فُرَصًا للإرشاد والتوظيف للأشخاص من ذوي الهمم.

• ويتحقَّق ذلك من خلال العمل عن كَثَب مع الحكومات والجامعات التكنولوجية والمؤسَّسات.

• المنصة مدعومة من اليونيسيف، ومايكروسوفت، ومجتمع ناشونال جيوجرافيك، بالإضافة إلى المنظَّمات الشريكة الأخرى، وهذا يُسهِّل على ذوي الهمم الوصول إلى خدمات وأماكن المنظمات.







Lesson 1



» Job seekers can upload their resume to the partnering company's site and the Human Resources (HR) department will review the resumes for consideration.

• يمكن للباحثين عن العمل أن يُحمِّلوا سيرتهم الذاتية إلى المواقع الإلكترونية الخاصة بالشركات الشريكة، وسيقوم قسم الموارد البشرية بفحصها.

Egypt's Efforts for People of Determination

» Egypt supports people of determination in many settings.

❶ To assist the visually impaired, the Taha Hussein Library in the New Bibliotheca Alexandrina has scanners with special software that converts printed text into audio.

❷ Scholarships and special opportunities are offered to gifted individuals, such as "The Miracle Child" Rania Saleh, who is a talented computer programmer with Down Syndrome.

❸ In 2022, Egypt launched several initiatives to empower over 20 million Egyptians who are people of determination.

» These initiatives guide organizations to integrate employees of determination in the workforce and create job opportunities.

» In addition, the Ministry of Manpower is developing programs that educate and train people of determination for the job market.

» Finally, efforts by Mr. Sawhney and the Egyptian State make rights and services truly inclusive.

• تدعم مصر الأشخاص من ذوي الهمم في العديد من الأماكن:

1. من أجل مساعدة ضعاف البصر، تحتوي مكتبة طه حسين في مكتبة الإسكندرية على ماسحات ضوئية تتضمّن برامج خاصة تُحوّل النص إلى صوت.
2. تُقدّم المنح والفرص المميزة للأفراد الموهوبين، مثل «الطفلة المعجزة» رانيا صالح، وهي مبرمجة كمبيوتر ماهرة مصابة بمتلازمة داون.
3. في سنة ٢٠٢٢، أطلقت مصر عدّة مبادرات لتمكين أكثر من ٢٠ مليون مصري من ذوي الهمم.

• تُرشد تلك المبادرات المنظّمات لدمج الموظفين من ذوي الهمم بالقوى العاملة وإنشاء فرص عمل لهم.

• إضافة إلى ذلك، تُطوّر وزارة القوى العاملة برامج لتعليم الأشخاص من ذوي الهمم وتدريبهم لسوق العمل.

• تسمح جهود السيّد ساوهني والدولة المصرية للحقوق والخدمات بأن تصبح شاملة حقًّا.

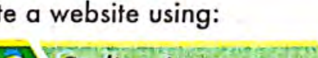
Explanatory Information

معلومات توضيحية إضافية خارج الكتاب المدرسي

Down Syndrome is a genetic disorder that some people are born with.
It means they have an extra chromosome in their body, which can make them look and learn a little differently.
People with Down Syndrome might need more time to learn things like talking, walking, and reading.
People with Down Syndrome are different from other people, but they are not bad.
They are just as special and valuable as anyone else.

Exercises Info

» There are several ways to create a website using:



1 Platforms

» It gives a few choices on the layout, color, and content.

Example: WordPress

• توفر بعض الخيارات بشأن التخطيط واللون والمحتوى.

2 Coding Languages



» It is used by expert programmers like Mr. Kartik Sawhney.

» It makes a website look a specific way and do exactly what you want.

• يتم استخدامه من قِبَل المبرمجين الخبراء مثل السيد ساوهني.

• يجعل موقع الويب يبدو بطريقة معينة ويفعل ما تريده بالضبط.



» HTML is a programming language that allows web developers to arrange the various parts of their website using less codes.

• لغة HTML هي لغة برمجة تسمح لمطوّري الويب بتنظيم الأجزاء المتعدّدة من موقعهم الإلكتروني باستخدام أكواد برمجية أقل.

Advantages of Learning HTML

1. It is relatively easy to learn and runs on all browsers.
2. It is best used for static web pages, which do not need to be updated frequently.
   For example, people who want to write about the history of a place and show photos of it can use static web pages.

• مزايا تعلّم HTML:

1. من السهل نسبيًّا تعلمها وتعمل على جميع المتصفحات.
2. من الأفضل استخدامها لصفحات الويب الثابتة، والتي لا تحتاج إلى التحديث بشكل متكرر.
   على سبيل المثال، يمكن للأشخاص الذين يرغبون بالكتابة عن تاريخ مكان ما وإرفاق صور له بأن يستخدموا صفحات الويب الثابتة.

Dynamic Web Design Languages

1. Websites that show results according to each user's history and interests need their web pages to change all the time.
2. These websites use dynamic web design languages, such as JavaScript, PHP, or Python.
3. Dynamic coding languages let websites track a customer's orders and favorite products or update search results in a browser.
4. Kartik Sawhney programs in Python, but he has also programmed in C# and C++.

• لغات تصميم الويب الديناميكية:

1. تحتاج مواقع الويب التي تعرض النتائج وفقًا لتاريخ كل مستخدم واهتماماته إلى تغيير صفحات الويب الخاصة بها طوال الوقت.
2. تستخدم مواقع الويب هذه لغات تصميم الويب الديناميكية، مثل: JavaScript أو PHP أو Python.
3. تسمح لغات البرمجة الديناميكية لمواقع الويب بتتبُّع طلبات العملاء والمنتجات المفضلة أو تحديث نتائج البحث في المتصفح.
4. كارتيك ساوهني يبرمج بلغة Python، لكنه أيضًا برمج بلغة C# و C++.

Exercises on Lesson 1

1 Choose the correct answer:

1. Mr. Kartik Sawhney is ....
   a. a National Geographic Explorer b. a computer expert
   c. both of them
2. Mr. Sawhney co-founded the .... platform to help people of determination.
   a. I-access b. I-Stem c. I-determination
3. Kartik Sawhney programs in ....; he has also programmed in C# and C++.
   a. HTML b. Python c. Java
4. Mr. Kartik Sawhney uses technology to empower ....
   a. people of determination b. computer engineers c. students
5. Kartik Sawhney studied .... in his Bachelor's and Master's degrees.
   a. Computer Hardware b. Computer Science c. Science
6. .... is a website that helps blind and visually impaired people read digital texts.
   a. The EKB b. Google c. Istemai.com
7. "The Miracle Child," Rania Saleh, is a talented .... with Down Syndrome.
   a. doctor b. explorer c. programmer
8. .... is a markup language that is used to create websites.
   a. HTML b. C++ c. Swift
9. Mr. Kartik Sawhney holds a Master's degree in Computer Science from .... University.
   a. Cairo b. Stanford c. Chicago
10. I-Stem platform is supported by ....
    a. National Geographic b. Microsoft c. both of them

11. HTML is used to create .... web pages.
    a. static b. dynamic
    c. both of the previous
12. Kartik Sawhney's studies focused on ....
    a. human-computer interaction b. artificial intelligence
    c. both of them
13. The .... platform includes mentorship and employment opportunities for people of determination.
    a. EKB b. I-Stem c. Facebook
14. You can create a website using ....
    a. programming languages
    b. platforms c. both of them
15. If you can't read a text, the first step to use the I-Stem platform is to ....
    a. upload the text b. convert the text to audio
    c. ask for help
16. Mr. Sawhney's app converts graphs into .... frequencies to allow the listener to hear the difference in information in the graph.
    a. audio b. video c. text
17. .... is relatively easy to learn and runs on all browsers.
    a. C++ b. PHP c. HTML
18. The Ministry of Manpower is developing programs that .... people of determination for the job market.
    a. educate and train b. entertain c. cure
19. The I-Stem platform includes .... opportunities for people of determination.
    a. mentorship and employment b. marriage
    c. travel
20. .... is/are example(s) of dynamic web design languages.
    a. JavaScript b. PHP c. Both a and b

Theme 1

21 When a person uploads a text to the Istemai website, the software converts the file into a/an .... document.
a. Word b. PDF c. Excel

22 What awards has Mr. Sawhney received for his outstanding work?
a. Nobel Prize b. Queen's Young Leaders Award
c. Grammy Awards

23 Mr. Sawhney develops applications to help .... people access visual content.
a. blind & visually impaired b. physically disabled c. deaf

24 The I-Stem platform includes volunteer .... that help people of determination write professional resumes.
a. teachers b. mentors c. scientists

25 Taha Hussein Library in the New Bibliotheca Alexandrina has scanners with special software to convert printed text into ....
a. digital text b. audio c. video

26 .... is used for static web pages, which do not need to be updated frequently.
a. JavaScript b. PHP c. HTML

27 When blind and visually impaired people upload a text to the I-Stem platform, they can listen to the text using ....
a. braille terminal b. screen readers
c. screen magnification software

28 .... programing language(s) allow(s) websites to track a customer's orders and favorite products or update the search results in a browser.
a. Static b. Dynamic c. Both a and b

29 People of determination upload their resumes on the .... website to be checked for employment.
a. partnering company's b. I-Stem c. HR

30 Taha Hussein Library in the New Bibliotheca Alexandrina has .... with special software to convert printed text into audio.
a. printers b. scanners c. speakers

Lesson 1

2 Put (✓) or (✗):

1 Kartik Sawhney is a computer expert. ( )
2 Kartik Sawhney programs in HTML. ( )
3 Mr. Sawhney develops apps to help people of determination. ( )
4 Kartik Sawhney is a National Geographic Explorer. ( )
5 There is one way to create websites using coding languages. ( )
6 Kartik Sawhney earned his Master's degree from Harvard University. ( )
7 Taha Hussein Library has printers that convert printed text into audio. ( )
8 Mr. Sawhney develops an app to convert graphs into audio frequencies. ( )
9 Kartik Sawhney studies Computer Science and focuses on artificial intelligence. ( )
10 "The Miracle Child" Rania Saleh is a programmer with Down Syndrome. ( )
11 HTML is difficult to learn as a programming language. ( )
12 The I-Stem platform includes employment opportunities for people of determination. ( )
13 Programmers, such as Mr. Sawhney, use platforms to create websites. ( )
14 HTML is a programming language used to create websites using less codes. ( )
15 Dynamic web design languages include JavaScript, PHP and Python. ( )
16 HTML is used for dynamic web pages. ( )
17 Kartik Sawhney has received national and international awards for his great work. ( )
18 Mr. Sawhney co-founded the I-Stem platform to help people of determination worldwide. ( )
19 There are several platforms that help in creating websites. ( )
20 Egypt launched several initiatives to empower people of determination and create job opportunities for them. ( )

Theme 1

21 Kartik Sawhney is a computer expert who uses technology to teach Computer Science. ( )

22 HTML doesn't run on all browsers. ( )

23 Egypt offers scholarships and special opportunities to talented people. ( )

24 Mr. Sawhney develops apps to help blind and visually impaired people. ( )

25 Istemai.com is a website that helps blind and visually impaired people read texts. ( )

26 The I-Stem platform works with governments and technical universities to support people of determination. ( )

27 The Ministry of Manpower is developing programs that prepare people of determination for the job market. ( )

3 Complete the following sentences using the words between the brackets:

(Screen readers – I-Stem – static – dynamic – artificial intelligence)

1. Mr. Kartik Sawhney's studies focused on .... and human-computer interaction.
2. HTML is used for creating .... web pages.
3. .... convert digital texts to audio.
4. Mr. Sawhney co-founded the .... platform.
5. Python is a programming language used to create .... web pages.

Lesson 2 Computer Network Devices

Networks



» They are groups of people, or things that are connected to each other for a common purpose.

• تُمثّل مجموعة من الأشخاص أو الأشياء المرتبطة بعضها ببعض لهدف مشترك.

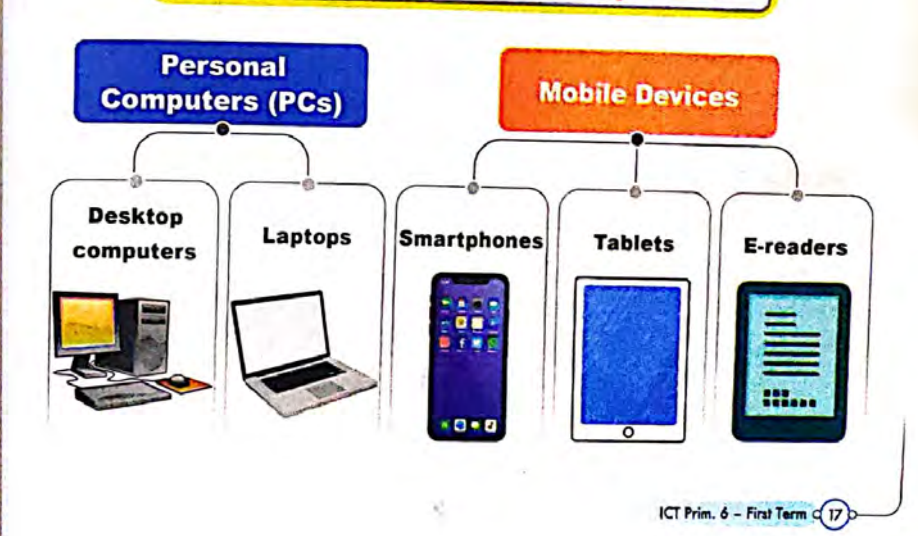
Computers



» They are electronic devices that **create**, **process**, and **store** information.

• أجهزة الكمبيوتر أجهزة إلكترونية تُنشئ المعلومات وتُعالجها وتُخزّنها.

Different Types of Computers



Theme 1

» Computer networks connect computers with each other to share important information and data.

• تربط شبكة الكمبيوتر أجهزة الكمبيوتر ببعضها البعض لمشاركة المعلومات والبيانات المهمّة.



معلومات توضيحية إضافية خارج الكتاب المدرسي

Smartphones, tablets, and e-readers are all types of computers. They all have the same basic components as a desktop or laptop computer, such as a central processing unit (CPU), memory, and storage. They also run software programs, just like traditional computers.

Making Connections

» There are two main ways to connect computers to a network: Wired and Wireless.

Wired Networks	Wireless Networks
• They use physical wirings and cables, which are plugged into holes on devices, called ports. • تستخدم الأسلاك والكابلات التي يتم توصيلها بفتحات في الأجهزة تُسمى المنافذ.	• They connect devices without wirings by using radio waves (wireless or Wi-Fi). • تقوم بتوصيل الأجهزة بدون أسلاك باستخدام موجات الراديو (لاسلكية أو Wi-Fi).

Ports

» They are holes (physical connectors) on devices where physical wirings and cables are plugged in.

» They are parts of a computing device available for connection with input and output devices.



• هي فتحات في الأجهزة حيث يتم توصيل الأسلاك والكابلات.

• هي أجزاء من جهاز كمبيوتر متاحة للاتصال بوحدات الإدخال والإخراج.

Lesson 2

Network Devices

» Computers need different network connection devices to transfer data.

1 Server

» It's a computer which provides services to other computers.

» It has large amounts of data storage that exist either as hardware or on the Internet.



• كمبيوتر يُوفِّر خدمات لأجهزة كمبيوتر أخرى، وتحوي كميات كبيرة من البيانات المخزَّنة، إمّا على أجهزة أو على الإنترنت.

2 Modem

» It's a device that connects a local area network (LAN) to the Internet.

» It converts the signal from the Internet service provider (ISP) and transforms the signal into a digital signal that can be read by devices.

• هو جهاز يصل شبكة محلية (LAN) بالإنترنت.

• يُحوِّل الإشارة من مزوِّد خدمة الإنترنت (ISP) إلى إشارة رقمية يمكن للأجهزة التعرُّف عليها.

3 Hub

» It allows wired devices to connect to a network and pass information to all the devices on that network.

» This can make it very slow, as there is a lot of information moving around.



• تتيح للأجهزة السلكية الاتصال بشبكة ما ونقل المعلومات إلى جميع الأجهزة الموجودة على تلك الشبكة، وهذا يجعلها بطيئة جدًّا؛ نظرًا لوجود الكثير من المعلومات المتبادلة.

4 Switches

» They work in a similar way to a hub, but they can send data to a specific device over a network, which helps make connections easier and faster.



• تعمل بطريقة مشابهة لـ Hub، لكن يمكنها إرسال بيانات إلى جهاز معيَّن عبر شبكة؛ وذلك يساعد في تيسير التواصل وإسراعه.

Theme 1

5 Router



» It functions as a gateway.

» It connects a modem to different networks.

• يعمل الراوتر بمثابة بوابة (Gateway)، فهو يربط بين المودم ومختلف الشبكات.

NOTES:

• Hubs and switches are both network devices that connect multiple devices together.

• Switches are intelligent, but hubs are unintelligent.

Exercises Info

Switches are intelligent because...	Hubs are unintelligent because...
1 They send data to only the intended (specific) device.	1 They send data to all connected devices, whether the device needs the data or not.
2 They can perform other tasks, such as Quality of Service (QoS), and security features to improve network performance.	2 They don't perform any additional tasks to improve network performance.
1 يرسلون البيانات إلى الجهاز المقصود (المحدد) فقط.	1 يرسلون البيانات إلى جميع الأجهزة المتصلة، سواء كان الجهاز بحاجة إلى البيانات أم لا.
2 يمكنهم أداء مهام أخرى مثل: جودة الخدمة (QoS)، وميزات الأمان لتحسين أداء الشبكة.	2 لا يؤدون أي مهام إضافية لتحسين أداء الشبكة.

Test Yourself

Complete the following:

1. A .... connects your device to the Internet via a cable or Wi-Fi.
2. .... send data to all the devices on that network.
3. .... pass data to a specific device over a network.
4. .... are intelligent, but .... are unintelligent devices.

Lesson 2

Artificial Intelligence (AI)

» It is a machine's intelligence that can be used to solve problems.

• الذكاء الاصطناعي (AI): هو ذكاء آلة يمكن استخدامه لحل المشكلات.

Examples of AI on your devices:

Navigation	Voice recognition	Virtual assistants	Holograms

• من أمثلة الذكاء الاصطناعي (AI) على أجهزتك: الملاحة، والتعرُّف على الصوت، والمساعد الافتراضي، والهولوغرامات.

» AI makes it possible for your phone or laptop to create holograms.

• الذكاء الاصطناعي يسمح لهاتفك أو جهاز الكمبيوتر الخاص بك بإنشاء الهولوغرامات.

Hologram: It is a 3-dimensional (3D) image that you can see without the use of special glasses or equipment.

هي صورة ثلاثية الأبعاد يمكنك رؤيتها من دون نظارات مميزة أو معدات.

» If you look at a regular 3D image without special 3D glasses, it will appear as a 2D image without any depth.

» Holographic images are becoming increasingly popular, used by educators teaching virtually and in advanced gaming systems.

• إذا نظرت إلى صورة عادية ثلاثية الأبعاد بدون نظارات ثلاثية الأبعاد، فستظهر كصورة ثنائية الأبعاد بدون أي عمق.

• تزداد الصور الهولوغرافية شهرة؛ إذ يستخدمها المدرِّسون الذين يعطون دروسًا افتراضية، وهي شائعة الاستخدام في أنظمة الألعاب المتقدمة.

Explanatory Information

معلومات توضيحية إضافية خارج الكتاب المدرسي

Navigation: AI is used in navigation apps to help you find your way around and suggest alternative routes, as in Google Maps.

Voice recognition: AI is used in voice recognition software to understand what you are saying, recognize your voice, and respond to your commands as in Alexa.

Virtual assistants: Virtual assistants, such as chatbots, use AI to provide personalized assistance and support to users. They can answer questions, provide recommendations, and perform tasks based on the user requests.

Exercises on Lesson 

1 Choose the correct answer:

1. .... are a group of people or things that are connected to each other.
   a. Servers b. Networks c. Hubs
2. .... are electronic devices that create, process, and store information.
   a. Computers b. Routers c. Switches
3. .... is/are a machine's intelligence that can be used to solve problems.
   a. Artificial intelligence b. Holograms c. Switches
4. Hubs and .... are both network devices that connect multiple devices together.
   a. servers b. switches c. Wi-Fi
5. .... are computers that have large amounts of data storage.
   a. Switches b. Servers c. Hubs
6. The data storage for a server can exist on ....
   a. a physical hardware b. the Internet c. both of them
7. A 3D image that you can see without the use of special glasses is called ....
   a. artificial intelligence b. hologram c. navigation
8. Computer networks are used to .... information and data.
   a. create b. delete c. share
9. A computer which provides services to other computers is called a ....
   a. server b. network c. cloud
10. .... networks connect devices using radio waves.
    a. Wired b. Wireless c. Both a and b
11. Wired networks connect devices using ....
    a. Wi-Fi b. radio waves c. cables
12. .... makes it possible for your phone or laptop to create holograms.
    a. Artificial intelligence b. Wi-Fi c. Bluetooth
13. .... are intelligent devices that pass information to a specific device over a network.
    a. Switches b. Hubs c. Modems
14. .... are holes on devices where physical cables are plugged in.
    a. Ports b. Modems c. Switches
15. .... is a device that connects a local area network (LAN) to the Internet.
    a. Artificial intelligence b. A modem c. A server
16. A .... works as a gateway and connects a modem to different networks.
    a. switch b. hub c. router
17. .... are parts of a computing device available for connections with input and output devices.
    a. Cables b. Modems c. Ports
18. .... is/are used by online educators and are also commonly used in advanced gaming systems.
    a. Zoom b. WhatsApp c. Holograms
19. A .... converts the signal from the Internet service provider (ISP) into a digital signal.
    a. modem b. router c. switch
20. .... connect devices to a network and send data to all the devices on that network.
    a. Switches b. Hubs c. Modems
21. Navigation, voice recognition, and virtual assistants are examples of .... on your phone.
    a. artificial intelligence b. holograms c. switches

Theme 1

2 Put (✓) or (✗):

1. Computers come in a variety of forms, including smartphones and tablets. ( )
2. Networks are groups of people or things that are connected to each other. ( )
3. A wireless network connects devices with physical wiring and cables. ( )
4. There is only one way to connect computers to a network: using cables. ( )
5. Computers don't need network connection devices to transfer data. ( )
6. Artificial intelligence allows your device to create holograms. ( )
7. Hubs are intelligent devices, but switches are unintelligent. ( )
8. Hubs allow wireless devices to connect to a network. ( )
9. A modem is a device that converts the signal from an ISP into a digital signal. ( )
10. Routers are electronic devices that create, process, and store information. ( )
11. Hubs can cause slow connections because they send data to all devices on the network. ( )
12. A regular 3D image will appear as a 2D image without 3D glasses. ( )
13. Ports are holes on devices where physical wirings are plugged in. ( )
14. Hubs send data to a specific device on the network. ( )
15. Wired networks use physical cables, which are plugged into holes on the devices called ports. ( )
16. Switches direct data to specific devices, making connections easier and faster. ( )
17. Holograms are 2D images that you can see without the use of special equipment. ( )
18. Artificial intelligence (AI) is a machine's intelligence that can be used to solve problems. ( )

Lesson 2

19. Servers are computers which provide services to other computers. ( )
20. Servers have limited amounts of data storage. ( )
21. Voice recognition, and virtual assistants are examples of AI on your device. ( )
22. Holographic images are used by online educators and are popularly used in advanced gaming systems. ( )

3 Complete the following sentences using the words between the brackets:

(unintelligent – router – specific – Holograms – AI)

1. Holograms can be created using ....
2. Switches send data to a .... device on the network.
3. A .... works as a gateway to connect devices to the Internet.
4. Hubs are .... devices.
5. .... are 3D images that can be seen without the use of special glasses.

4 Choose from column (A) what suits it in column (B):

Column (A)	Column (B)
1. A router	a. is a computer which stores large amounts of data.
2. A server	b. passes information to all the devices on the network.
3. A switch	c. are holes on devices where cables are plugged in.
4. A hub	d. is a gateway that connects a modem to different networks.
5. Ports	e. is an intelligent device that sends data to a specific device on the network.

1. .... 2. .... 3. .... 4. .... 5. ....

Theme 1

5 Read the sentences and name the device:

This item...	What am I?
① ... connects a network to another network. You need it to connect any device to the Internet.	....
② ... sends data to a specific device over a network.	....
③ ... sends data to all wired devices connected to it.	....
④ ... is the part of a computing device available for connection with input (e.g., a keyboard, or a mouse) and output devices (e.g., speakers, a printer).	....
⑤ ... is a computer which provides services to other computers. There are many different types, but a common function is to store audio files, video files, documents, and many other file types.	....
⑥ ... allow wired devices to connect to a network and pass information to all the devices on that network.	....

6 Think about the network equipment you will need for the following scenarios and create a computer network for each one. Draw and label the networks.

Hub Modem Network cable Router Server Switch

① Fares wants to connect his laptop to his parent's desktop computer.

② Mrs. Gamal's ICT classroom has ten PCs and wants everyone to be able to access all files, even when one computer is turned off.

③ Everyone in Mostafa's football team needs to access the Internet to play online multi-player football games.

Lesson 3 Futuristic Technology

» Augmented reality, virtual reality, and artificial intelligence (AI) feel futuristic, but they are already being used in education and everyday life.

• يبدو أن الواقع المُعزَّز (AR) والواقع الافتراضي (VR) والذكاء الاصطناعي (AI) أنواع من التكنولوجيا المستقبلية، لكن يتم استخدامها بالفعل في التعليم والحياة اليومية.

Augmented Reality (AR)

» Augmented reality (AR) combines **the real world** with **a virtual world** by adding computer-generated images.

» This can be done through **the camera** of a smartphone or a tablet and will show a **3D model** of what looks like the real world.

• يجمع الواقع المُعزَّز بين العالم الحقيقي والواقع الافتراضي بإضافة صور مُولَّدة بالكمبيوتر.

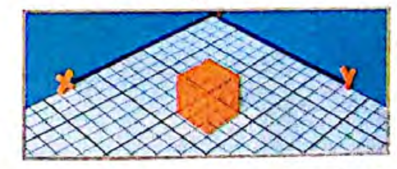
• يمكن فعل ذلك بواسطة كاميرا الهاتف الذكي أو جهاز لوحي، وهذا سيعرض نموذجًا ثلاثي الأبعاد لما يشبه العالم الحقيقي.

For example:

• **In a math class,** students can use their smartphone camera to project 3D images of shapes like cubes or cylinders onto a flat surface, making it appear as if the shapes are in front of them.

• **In a science class,** students can use a sky map app to point at the night sky and see a digital layer of labeled stars, planets, and nebulae.

• AR helps students become active participants in learning and makes learning more memorable.





• فعلى سبيل المثال: في حصة الرياضيات، يمكن للطلاب استخدام كاميرا هواتفهم الذكية لعرض صور ثلاثية الأبعاد لأشكال مثل المكعبات أو الأسطوانات على سطح مسطح؛ مما يجعلها تبدو وكأنها أمامهم.

• ويمكن للتلاميذ في حصة العلوم أيضًا استخدام تطبيق الخرائط السماوية؛ لتوجيه الهاتف إلى السماء ليلًا ورؤية طبقة رقمية من النجوم والكواكب والسُّدُم.

• يساعد الواقع المُعزَّز التلاميذ ليصبحوا مشاركين نشطين في التعلُّم، ويجعل التعلُّم لا يُنسى.

Explanatory Information

معلومات توضيحية إضافية خارج الكتاب المدرسي

- Augmented reality (AR) is a technology that adds digital images or information to the real world around you.
- For example, you can see a dinosaur walking around your living room, or the names of all the stars in the night sky.
- Another example is the game Pokémon Go, where you can catch Pokémon that appears in the real world through your phone's camera.
  - That's AR! It's like adding a layer of fun and imagination to the real world.
  - AR works by using a device, such as a smartphone or tablet, to scan the real world. The device then uses this information to overlay digital information on top of the real world.

Virtual Reality (VR)

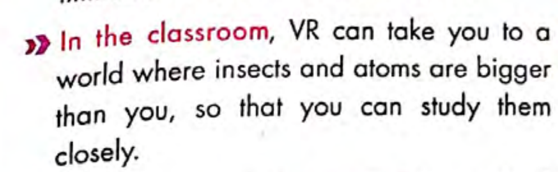
Virtual reality (VR): It is a simulated 3D environment that allows users to explore and interact with the surroundings as if they were in reality.

الواقع الافتراضي بيئة تخيلية ثلاثية الأبعاد تسمح للمُستخدِمين باستكشاف محيطهم والتفاعُل معه وكأنّه حقيقة.





- To experience VR, users often wear a VR headset that blocks out the real world and provides 360-degree views that immerse the user in another world.
- In the classroom, VR can take you to a world where insects and atoms are bigger than you, so that you can study them closely.



- It can take you to a museum thousands of miles away or to a historical site hundreds of years ago.
- A cardboard VR headset is an inexpensive way to experience VR using almost any smartphone.

NOTE:

- You can use the Egyptian Knowledge Bank to locate websites that include AR and VR experiences in Egypt.

- لتجربة الواقع الافتراضي، يرتدي المستخدمون غالبًا «سماعة رأس VR»؛ إذ تحجب عنهم الحياة الواقعية، وتوفر لهم إطلالات بزاوية ٣٦٠ درجة تجعل المستخدم ينغمس في عالم آخر.
- أما في غرفة الفصل، فيمكن أن يأخذك الواقع الافتراضي إلى عالم حيث الحشرات أو الذرات أكبر منك حجمًا؛ لتتمكَّن من دراستها بعناية.
- يمكن أيضًا من خلاله أن تزور متحفًا يبعد عنك آلاف الأميال، أو يأخذك إلى موقع أثري قديم يعود لمئات السنين.
- إن «سماعة رأس VR» المصنوعة من الورق المُقوّى، من الأدوات الرخيصة لتجربة الواقع الافتراضي، ويمكن استخدامها مع معظم أنواع الهواتف الذكية.





Theme 1

Explanatory Information

معلومات توضيحية إضافية خارج الكتاب المدرسي

An example of virtual reality (VR): Imagine you're studying ancient Egypt. With VR, you can feel like you're actually there in the Pyramids! You can see everything, like you're really inside the Pyramids. You can even hear sounds and feel like you're really there!

- VR is like playing a video game, but instead of just watching the screen, you can feel like you're really inside the game.
- VR works by using special equipment like a headset and gloves to see, hear, and touch things in this virtual world.

Artificial Intelligence (AI)

- It is the ability of a machine, such as a computer, to think and learn.
- A computer learns by analyzing the provided examples.

- الذكاء الاصطناعي هو قدرة آلة مثل الكمبيوتر على التفكير والتعلم.
- يتعلم الكمبيوتر من خلال تحليل الأمثلة المتوفرة له.

Example on using AI:

1. A smartphone or email program predicts the next word you will type learns from the words you have typed before.
2. AI is used to unlock your phone with facial recognition.
3. AI is also used to personalize social media content and search results.

- AI runs in the background of programs, doing things such as:
  a. Filtering spam mail
  b. Matching a passenger with an available driver

1. الهاتف الذكي أو برنامج البريد الإلكتروني يتنبأ بالكلمة التالية التي ستكتبها، حيث يتعلم من الكلمات التي كتبتها سابقًا.
2. يُستخدم الذكاء الاصطناعي لإلغاء القفل وفتح هاتفك من خلال نظام التعرُّف على الأوجه.
3. ويُستخدم أيضًا لتخصيص محتوى الوسائط الاجتماعية ونتائج البحث.

- يعمل الذكاء الاصطناعي في خلفية البرامج، وينجز أمورًا مثل تصفية الرسائل الإلكترونية المزعجة أو مطابقة الراكب مع السائق المتوفر.







Lesson 3

How can futuristic technology improve education and life?

- Futuristic technologies can improve the lives of people of determination.
- For example:

1. Someone with a visual impairment can use AR to see their family members up close.
2. Disabled individuals can use virtual assistants powered by AI to accomplish everyday tasks, such as making phone calls and navigating their computer using their voice or sign language.
3. VR can also immerse able-bodied people in experiences that demonstrate the barriers disabled people face every day.



كيف يمكن للتكنولوجيا المستقبلية تحسين التعليم والحياة اليومية؟

- يمكن للتكنولوجيا المستقبلية تحسين حياة الأشخاص ذوي الهمم، فعلى سبيل المثال:

1. يستطيع شخص ضعيف البصر أن يستخدم الواقع المُعزَّز (AR)؛ لرؤية أفراد أسرته عن قرب.
2. يمكن للأشخاص ذوي الهمم استخدام مساعدين افتراضيين مدعومين بالذكاء الاصطناعي لإنجاز المهام اليومية، مثل الاتصالات الهاتفية واستخدام أجهزة الكمبيوتر الخاصة بهم باستخدام أصواتهم أو لغة الإشارة.
3. يمكن للواقع الافتراضي أيضًا أن يغمر الأشخاص الأصحاء في تجارب تُبيِّن لهم العراقيل التي يواجهها ذوو الهمم يوميًا.

Exercises on Lesson 3

1 Choose the correct answer:

1. .... combines the real world with a virtual world by adding computer-generated images.
   a. Virtual reality b. Augmented reality c. Assistive technology
2. .... is a simulated 3D environment that allows users to explore and interact with the surroundings as if they were in reality.
   a. Virtual reality b. Artificial intelligence c. Assistive technology
3. .... is the ability of a machine such, as a computer, to think and learn.
   a. Virtual reality b. Augmented reality c. Artificial Intelligence
4. Visually impaired people can use .... to see their family members up close.
   a. artificial intelligence b. augmented reality c. hearing aids
5. To experience virtual reality, users often wear ....
   a. 3D glasses b. VR headsets c. AR headsets
6. Augmented reality can be done using the .... of your smartphone.
   a. microphone b. speaker c. camera
7. A VR headset blocks out the .... world and provides 360-degree views.
   a. real b. virtual c. both of the previous
8. Facial recognition is a feature used to unlock your phone using ....
   a. artificial intelligence b. virtual reality c. augmented reality
9. Augmented reality shows a/an .... model of what looks like the real world.
   a. 2D b. 3D c. invisible
10. A cardboard VR headset is a/an .... way to experience VR using your smartphone.
    a. expensive b. inexpensive c. difficult
11. Students can use a .... app to point at the night sky and see a digital layer of labeled stars, planets, and nebulae using AR.
    a. Google Maps b. Vlaby c. Sky Map
12. A computer learns by .... the provided examples.
    a. analyzing b. storing c. saving
13. Predicting the next word you will type using your smartphone is an example of ....
    a. virtual reality b. augmented reality c. artificial intelligence
14. Disabled people can use virtual assistants powered by .... to do everyday tasks, such as navigating their computer.
    a. artificial intelligence b. augmented reality c. virtual reality

2 Put (✓) or (✗):

1. A computer learns by analyzing the provided examples. ( )
2. The Uber app uses artificial intelligence to match riders with available drivers. ( )
3. Augmented reality, virtual reality, and artificial intelligence (AI) are considered futuristic technologies. ( )
4. Futuristic technologies can't improve the lives of people of determination. ( )
5. Artificial intelligence can run in the background of programs to filter spam mail. ( )
6. There is no difference between augmented reality and virtual reality. ( )
7. Virtual reality is a simulated 2D environment that allows users to interact with the surroundings. ( )
8. A VR headset blocks out the real world, and provides 360-degree views. ( )

9. AR combines the real and virtual worlds to show 3D models that look real. ( )
10. AI is used to unlock your phone with facial recognition. ( )
11. Augmented reality helps students become active participants in learning. ( )
12. The ability of a machine, such as a computer, to think and learn is called AR. ( )
13. A cardboard VR headset is an expensive way to experience virtual reality. ( )
14. To experience virtual reality, users often wear a AR headset. ( )
15. Virtual reality allows you to explore museums from all over the world without leaving your home. ( )

3 Choose from column (A) what suits it in column (B):

Column (A)	Column (B)
1 VR	a. includes AI, AR and VR.
2 AR	b. is the ability of a machine to think and learn.
3 AI	c. can be used to do everyday tasks, such as making phone calls.
4 Virtual assistants	d. is a simulated 3D environment that allows users to interact with the surroundings.
5 Futuristic technology	e. adds computer-generated images to show a 3D model of what looks like the real world.

1 ______ 2 ______ 3 ______ 4 ______ 5 ______

Lesson 4 Evaluating Cutting-Edge Technology

Reliable Cutting-Edge Technology

Cutting-edge technology

» It's the newest and most advanced version of a service or product.

• التكنولوجيا المُتطوِّرة: هي الإصدار الأحدث والأكثر تقدمًا من خدمة أو منتج.

Assistive technology

» It helps people of determination with tasks they find challenging, such as:

1. Screen magnification software
2. Hearing aids
3. Programs that turn speech into text and text into speech

• التكنولوجيا المُساعِدة: تساعد الأشخاص ذوي الهمم في أداء المهام التي يجدونها صعبة، مثل: برمجيات تكبير الشاشة، والسماعات الطبية، والبرامج التي تُحوِّل الكلام إلى نص والنص إلى صوت مسموع.

Cutting-Edge Technology Examples

Artificial Intelligence (AI)



Augmented Reality (AR)



Virtual Reality (VR)

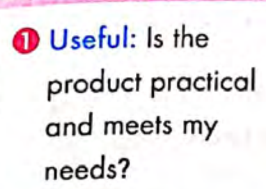


- Cutting-edge technology has transformed life in ways that were unimaginable even a decade ago.
- These changes are emerging in new and exciting ways to help in the education, improving lives, and inclusion in society, such as the assistive technology of smartgloves.

Smartgloves

They empower deaf people to translate their signs in real time to spoken or text output.

القفازات الذكية تُمكِّن الأشخاص الصم من ترجمة إشاراتهم فوريًّا إلى مُخرَج نصي أو منطوق.



- It is important to be objective and evaluate these new technologies that are pushing the frontiers of knowledge.
- By evaluating, society as a whole is better informed to make decisions regarding the use and development of such technologies.

- أحدثت التكنولوجيا المتطورة تغييرات في الحياة بطُرُق لم يكن من الممكن تصوُّرها حتى قبل عقد من الزمان.
- تظهر هذه التغييرات بطُرُق جديدة ومثيرة للمساعدة في التعليم، وكذلك لتحسين الحياة والاندماج في المجتمع، مثل القفازات الذكية من فئة التكنولوجيا المُساعِدة.
- من المهم أن نُقيِّم هذه التكنولوجيات الجديدة بموضوعية وعقلانية؛ وذلك لأنها تُوسِّع آفاق المعرفة باستمرار.
- من خلال التقييم، يكون المجتمع ككل على دراية أفضل لاتخاذ القرارات المُتعلِّقة باستخدام هذه التكنولوجيات وتطويرها.

- There are different evaluation tools we can use to evaluate these new technologies.

Explanatory Information

معلومات توضيحية إضافية خارج الكتاب المدرسي

- Assistive technology smartgloves are devices that use sensors to track the movements of the wearer's hands. These movements are then sent to a computer or smartphone, which uses artificial intelligence (AI) to translate them into spoken or text output.
- This allows deaf people to communicate with others who do not know sign language.

User Experiences (UX)

User experiences:

- They describe how people use and interact with a product and how they evaluate their experiences.
- User experience is often divided into different areas and can be positive or negative.

- تجربة المُستخدِم تصف كيفية استخدام الأشخاص للمنتج وتفاعلهم معه وكيفية تقييمهم لتجاربهم.
- غالبًا ما تُقسَّم تجربة المُستخدِم إلى مجالات مختلفة، ويمكن أن تكون إيجابية أو سلبية.

7 factors that affect UX:

1. **Useful:** Is the product practical and meets my needs?
2. **Usable:** Is the product easy to use and understand?
3. **Findable:** If there is an issue with the product, can I find the solution?



4. **Credible:** Are the company and its products trustworthy?
5. **Accessible:** Is the product accessible for people with disabilities?
6. **Desirable:** Is the product pleasant to look at and interact with?
7. **Valuable:** Does the product improve my life or help me learn?

Theme 1

Meeting Needs

- User experience is interlinked with the **development** of products and services.
- The goal of cutting-edge assistive technology, which comes in many forms, is always the same:
  1. To improve someone's independence.
  2. Consequently, to be included in the society.

تلبية الاحتياجات:

- ترتبط تجربة المُستخدِم بتطوير المنتجات والخدمات.
- الهدف من التكنولوجيا المُساعِدة المتطوِّرة، والتي تأتي في أشكال عديدة، هو دائمًا نفس الشيء: تحسين استقلالية شخص ما؛ وبالتالي اندماجه في المجتمع.



How to choose the best assistive technology?

- There are several steps and considerations that include:
  1. Awareness of the person's abilities and challenges
  2. Identifying and defining a specific need
  3. Brainstorming possible cutting-edge assistive technology products
  4. Designing and testing
  5. Reviewing what works well, what doesn't work as well, and adapting to meet the user's needs



- يوجد خطوات واعتبارات مُتعدِّدة تشمل ما يلي:
  1. الوعي بقدرات الشخص وتحدِّياته.
  2. تحديد حاجة معينة وتعريفها.
  3. التفكير في أكثر منتجات التكنولوجيا المُساعِدة تطوُّرًا.
  4. التصميم والاختبار.
  5. إعادة النظر في منتجات التكنولوجيا المُساعِدة التي تعمل بشكل جيِّد، والتي لا تعمل بشكل جيِّد، والتعديل فيها؛ لتتلاءم مع حاجات المُستخدِم.

Exercises on Lesson 4



1 Choose the correct answer:

1. The newest and most advanced version of a service or product is called .... technology.
   a. assistive b. cutting-edge c. virtual
2. .... technology helps people of determination with tasks they find challenging.
   a. Assistive b. Cutting-edge c. Virtual
3. Screen magnification software and hearing aids are types of .... technology.
   a. futuristic b. cutting-edge c. assistive
4. .... describe how people interact with a product, and how they evaluate their experiences.
   a. Futuristic technology b. User experience c. Virtual reality
5. Artificial intelligence, augmented reality, and virtual reality are examples of .... technology.
   a. assistive b. cutting-edge c. Microsoft
6. .... empower deaf people to translate their signs to spoken or text output.
   a. Hearing aids b. Smart glasses c. Smartgloves
7. If the product is practical and meets the customer's needs, the user experience will be ....
   a. positive b. negative c. neutral
8. Complicated and hard-to-use products result in .... user experiences.
   a. positive b. negative c. neutral

2 Put (✓) or (✗):

1. The newest and most advanced version of smartphones is called assistive technology. ( )
2. Smartgloves are a type of assistive technology. ( )

3. Artificial intelligence is one of the cutting-edge technologies. ( )
4. Programs that convert speech to text and vice versa are a type of assistive technology. ( )
5. User experiences describe how people use a product and evaluate their experiences. ( )
6. A user experience is always positive. ( )
7. Credibility and accessibility are factors that affect user experiences. ( )
8. Smartgloves don't empower people of determination. ( )
9. The development of products and services doesn't affect the user experience. ( )
10. One of the goals of assistive technology is to improve someone's independence. ( )
11. The best assistive technology for a person depends on their individual abilities and challenges. ( )
12. Assistive technology helps people of determination to be included in the society. ( )
13. If the product is pleasant to look at and interact with, this makes the user experience negative. ( )

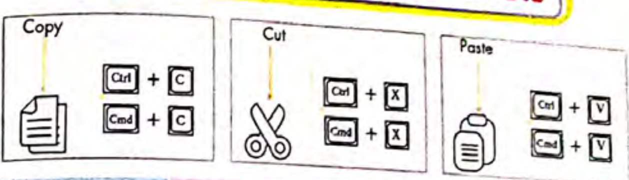
3 Complete the following sentences using the words between the brackets:

(Cutting-edge technology – User experiences – Smartgloves – Assistive technology – Hearing aids)

1. .... translate sign language to speech or text.
2. .... helps people of determination with tasks they find challenging.
3. .... is/are how people feel about using a product.
4. .... is/are the latest and most advanced technology.
5. .... is/are a type of assistive technology that can help people with hearing troubles.

Lesson 5 Digital Research Skills

Useful Digital Search Tools



OS \ Command	Copy	Cut	Paste
• Windows	• Ctrl + C	• Ctrl + X	• Ctrl + V
• MacOS	• Cmd + C	• Cmd + X	• Cmd + V

» Copy, cut, and paste are some of the most commonly used word processing commands.

» They are very useful when copying, cutting, or pasting:

- Text
- Images
- Information for citing sources

• أوامر النسخ والقص واللصق هي بعض أوامر معالجة الكلمات الأكثر استخدامًا، وتكون مفيدة جدًا عند نسخ أو قص أو لصق نص أو الصور أو الاستشهاد بالمصادر.



» All of these tools are used to search for information, but the results will be different.

» Knowing what results you need helps to inform which search tool(s) you could use.

• أدوات البحث الرقمية تتضمَّن: البحث عبر الإنترنت، ومُحرِّكات البحث المتخصصة، والمكتبات الإلكترونية الموثوقة والمتاحة عبر الإنترنت.

• تساعد الأدوات في البحث عن المعلومات المطلوبة، لكنَّ النتائج الصادرة عن كلٍّ منها تكون مختلفة؛ ولذلك تساعد معرفة النتائج التي تحتاج إليها في تحديد أداة/أدوات البحث التي يمكنك استخدامها.

Theme 1

Search Engines



- Search engines help people search internet websites based on keywords and phrases.
- They are user-friendly, very fast, and often give many results.
- Be sure that the content you select is credible, accurate, and unbiased.
- Examples: Google, Bing

• تساعد مُحرِّكات البحث الأشخاص على البحث في مواقع الإنترنت بناءً على الكلمات والعبارات الرئيسة.
• وهي سهلة الاستخدام وسريعة جدًّا، وغالبًا ما تُظهر العديد من النتائج.
• تأكَّد من أن المحتوى الذي تختاره موثوق ودقيق وغير منحاز.

Databases

Databases

- They are collections of information which are typically stored on a computer system and can be accessed for free through a school or library.

• قواعد البيانات عبارة عن مجموعات من المعلومات، تُخزَّن عادةً في نظام حاسوبي، ويمكن الوصول إليها مجانًا من خلال مدرسة أو مكتبة.



- A database is a good place to search for information from journals, newspapers, and reference books.

• قاعدة البيانات مكان جيِّد للبحث عن المعلومات من المجلات والصحف والكتب المرجعية.

General Database	Subject Database
• It covers many subjects. • Ex: EKB Note: A search for 'self-driving car' on the EKB won't provide a lot of results, but the results will be credible and accurate. • قاعدة البيانات العامة تتناول العديد من الموضوعات مثل بنك المعرفة المصري. ملحوظة: لن يُوفِّر البحث عن «سيارات ذاتية القيادة» على موقع بنك المعرفة المصري الكثير من النتائج، ولكنها ستكون موثوقة ودقيقة.	• It covers only one subject, such as business or law. • Any results will be specific to your topic. • قاعدة البيانات المتخصصة تتناول موضوعًا واحدًا فقط، مثل ريادة الأعمال أو القانون، وأي من نتائجها ستكون محددة لموضوع بحثك.

Lesson 5

Library Catalogs

Library catalog

- It is a database that includes all the items owned by a library.

فهرس المكتبة هو قاعدة بيانات تضم كل المصادر والعناصر التي تحتويها المكتبة.

- A library catalog search may include recently published books, including e-books with the most recent research about a subject.

• قد يتضمَّن البحث في فهرس المكتبة كتبًا منشورة حديثًا، بما في ذلك الكتب الإلكترونية التي تحوي أحدث الأبحاث في موضوع معيَّن.

Conducting a Database Search

- When you search any database:
  1. Use a keyword search.
  2. Review the results for subject headings and search again with those terms.
  3. You can use other database fields, such as author or journal title to narrow a search.
- Limiting a search to the last few years will help you find the most up-to-date research.

• عند البحث في أيِّ قاعدة بيانات، استخدِم البحث بالكلمات المفتاحية.
• أعِد النظر في نتائج عناوين الموضوع، وابحث مجدَّدًا باستخدام هذه المصطلحات.
• يمكنك استخدام حقول أخرى متوفِّرة في قاعدة البيانات، مثل: اسم المؤلِّف أو عنوان المجلة؛ لتضييق نطاق البحث.
• سيساعدك حدُّ البحث بالسنوات القليلة الماضية في العثور على أحدث الأبحاث.



Exercises on Lesson 5

1 Choose the correct answer:

1. EKB is a .... source of information.
   a. credible b. unreliable c. biased
2. You can use .... to search on the Internet using keywords and phrases.
   a. search engines b. programing languages c. books
3. .... is/are collections of information that are typically stored on a computer system.
   a. Search results b. Databases c. Software
4. The shortcut used in Windows to paste a text or image is ....
   a. "Cmd + V" b. "Ctrl + V" c. "Ctrl + P"
5. The keyboard shortcut "Cmd + X" is used to .... a text or an image in macOS.
   a. copy b. cut c. paste
6. You can use the shortcut "Ctrl + C" to .... a text or an image in Windows.
   a. copy b. cut c. paste
7. When conducting a digital search, make sure the information you get is ....
   a. credible b. biased c. unreliable
8. .... is a database which includes all the items owned by a library.
   a. EKB b. A digital library c. A library catalog
9. The .... database covers only one subject, such as business or law.
   a. general b. subject c. electronic

10. Search engines help people search online based on ....
    a. keywords b. phrases c. both of the previous
11. EKB is an example of a .... database which covers many subjects.
    a. subject b. general c. network

2 Put (✓) or (✗):

1. There is only one type of database. ( )
2. EKB is an example of a subject database. ( )
3. Databases can be accessed for free through a school or library. ( )
4. It is not important to credit the source of information. ( )
5. All digital search tools give similar results. ( )
6. It is recommended to use a keyword to conduct a database search. ( )
7. A library catalog search doesn't include recently published books. ( )
8. You can press "Ctrl + C" to cut a text or an image in Windows. ( )
9. The shortcut "Cmd + V" is used to paste a text or an image in macOS. ( )
10. EKB is an inaccurate source of information. ( )
11. Bing is a reliable database. ( )
12. Some Google search results may be biased. ( )
13. Limit your search to the last few years to get up-to-date results from a database. ( )
14. Be sure the search result you select is credible and accurate. ( )
15. Search engines are user-friendly, very fast, and often give many results. ( )
16. A database is a good place to search for information from journals, newspapers, and books. ( )
17. The shortcut "Cmd + X" is used to cut a text or an image in Windows. ( )
18. The type of results you need will help you choose which search tool to use. ( )

Theme 1

19 General databases are designed to provide information on a specific topic. ( )

20 You can use other database fields, such as author or journal title, to narrow a search. ( )

3 Complete the following sentences using the words between the brackets:

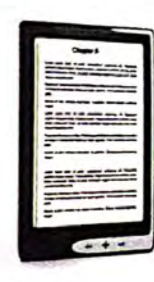
(library catalog – cut – keywords – subject database – EKB)

1. The shortcut "Ctrl + X" is used to .... a text in Windows.
2. .... is an example of a general database which covers many subjects.
3. It is preferable to use .... to search for information on a database.
4. A .... covers only one subject and any results will be specific to your topic.
5. A .... is a database which includes all the items owned by a library.

Lesson 6 Mobile Devices

Types of Mobile Devices

» Mobile devices include smartphones, tablets, and e-readers.

Smartphones and Tablets	E-readers
• They surf the web and check emails, similar to PCs. • They often have high-quality cameras, speakers, and screen resolution. • تُستخدم الهواتف الذكية والتابلت في تصفُّح شبكة الإنترنت، والتحقُّق من البريد الإلكتروني مثل أجهزة الكمبيوتر الشخصية. • وغالبًا ما تحتوي على كاميرات وسماعات ودقَّة شاشة عالية الجودة. 	• They look like tablets, but are mainly used for reading books. • القارئات الإلكترونية تبدو مثل التابلت، ولكنُّها تُستخدَم بشكل أساسي في قراءة الكتب. 

Mobile devices features

» These handheld computers are portable and can access the Internet.

» They can be held in landscape or portrait mode, laid flat, and connected to other devices.

» Many mobile devices function by touch.

- تتميُز أجهزة الكمبيوتر المحمولة هذه بقابلية حملها وإمكانية اتصالها بشبكة الإنترنت.
- ويمكن حملها في وضع أفقي أو عمودي أو وضعها بشكل مسطَح، والاتصال بأجهزة أخرى.
- تعمل العديد من الأجهزة المحمولة بتقنية اللمس.

Theme 1

Mobile devices and learning

- Mobile devices offer higher engagement levels for students and extend learning beyond the classroom, for example:
  1. Creating short videos or taking photos for projects.
  2. Scanning QR codes to access content-related videos, audios, and texts created by the teacher, and the students themselves.
  3. Greater opportunities for collaboration by using online post-it walls, shared class forums, or group chats.
  4. Listening to podcasts, reviews of video games, and accessing learning apps.

• تتيح الأجهزة المحمولة مستويات مشاركة بمعدَّل أعلى للطلاب، وتوسع نطاق التعلُّم خارج الفصل الدراسي، على سبيل المثال:
1. إنشاء مقاطع فيديو قصيرة أو التقاط صور للمشروعات.
2. مسح رموز الاستجابة السريعة QR codes للوصول إلى الفيديو والمقاطع الصوتية والنصوص ذات الصلة بالمحتوى، والتي أنشأها المعلِّم والتلاميذ أنفسهم.
3. إتاحة المزيد من الفرص للتعاون من خلال استخدام جدران نشر التعليقات عبر الإنترنت أو منتديات الفصل المشتركة أو الدردشات الجماعية.
4. الاستماع إلى المدوَّنات الصوتية (البودكاست) والحصول على التقييمات الخاصة بألعاب الفيديو والوصول إلى تطبيقات التعلُّم.

The challenges of using mobile devices

- Some people say that having such easy access to any information has decreased:
  1. Thinking skills
  2. Social interaction
  3. People's attention span
- Being tempted to use the device for social or entertainment reasons is another possible issue.
- Small screens can make reading texts challenging and viewing complex graphics difficult.

• يرى البعض أن سهولة الوصول إلى المعلومات قد قلَّل من مهارات التفكير والتفاعل الاجتماعي، ومن مدى فترة تركيز الناس.
• التعرُّض لإغراء استخدام الجهاز المحمول لأسباب اجتماعية أو ترفيهية، يُعَدُّ مشكلة أخرى مُحتمَلة.
• كما يمكن للشاشات الصغيرة أن تجعل قراءة النصوص ومشاهدة الرسومات البيانية المعقدة أمرًا صعبًا.





معلومات توضيحية إضافية خارج الكتاب المدرسي



- Online post-it walls are a great way to brainstorm ideas and collaborate on projects.
- They allow users to post sticky notes with their ideas, which can then be easily shared and edited by others. This makes it easy to keep track of everyone's ideas.
- Google Keep and Evernote are examples of online post-it wall apps.

Providing solutions with cutting-edge assistive technology

- Without cutting-edge assistive technology products and apps for tablets and smartphones, people of determination face challenges accessing education, healthcare, and employment.
- Cutting-edge assistive technology installed on mobile devices is providing new solutions.

For examples:
1. This technology can connect homebound individuals with their educational provider.
2. A speech assistance app can help a non-verbal student participate in a class.
3. Assistive software on tablets and smartphones can help people of determination in the workplace to manage time and tasks.

- Essential future skills can be developed so that all citizens can use their mobile devices to access learning.

• من دون منتجات وتطبيقات التكنولوجيا المُساعِدة المتطوِّرة المخصصة للأجهزة اللوحية والهواتف الذكية، يواجه ذوو الهمم تحدِّيات في الحصول على التعليم والرعاية الصحية والتوظيف.
• تُوفِّر التكنولوجيا المُساعِدة المتطورة المثبَّتة على الأجهزة المحمولة حلولًا جديدة. على سبيل المثال، يمكن لهذه التكنولوجيا ربط الأفراد المجبرين على البقاء في المنزل بمُقدِّم الخدمات التعليمية الخاص بهم.
• كما يمكن لتطبيقات المساعدة على الكلام مساعدة التلاميذ المصابين باضطراب التعلُّم غير اللفظيِّ في المشاركة داخل الفصل.
• وتُعاون البرامج المُساعِدة المثبَّتة على الأجهزة اللوحية والهواتف الذكية الأشخاص ذوي الهمم على إدارة الوقت والمهام في أماكن عملهم.
• يمكن تطوير المهارات المستقبلية الأساسية؛ حتى يتمكَّن جميع المواطنين من استخدام أجهزتهم المحمولة للتعلُّم.

Exercises on Lesson 6

1 Choose the correct answer:

1. .... include(s) smartphones, tablets, and e-readers.
   a. Assistive technology b. Mobile devices c. Network devices
2. .... are used to surf the web and check emails, like PCs.
   a. Smartphones and tablets b. Cameras and speakers c. Keyboards
3. You can scan QR codes to access ....
   a. text b. video and audio c. both of the previous
4. E-reader is a mobile device that is mainly used to ....
   a. read books b. watch videos c. check emails
5. Smartphones and tablets often have ....
   a. cameras b. speakers c. both of the previous
6. .... app can help a non-verbal student participate in a class.
   a. A screen magnification b. A speech assistance c. Zoom
7. Mobile devices can be used in .... mode(s), depending on the required task.
   a. portrait b. landscape c. both of the previous
8. Smartphones and tablets often have ....-quality screen resolution.
   a. high b. low c. normal
9. Mobile devices can help students learn in more engaging ways beyond the classroom through activities, such as ....
   a. listening to podcasts b. scanning QR codes c. both of the previous
10. You can use mobile devices to scan .... and access related content.
    a. PIN codes b. QR codes c. podcasts

2 Put (✓) or (✗):

1. There is no difference between smartphones and e-readers. ( )
2. E-readers are a type of mobile device. ( )
3. Smartphones and tablets are used to browse the web and check emails. ( )
4. E-readers often have high-quality cameras and speakers. ( )
5. Some people think that easy access to information may decrease thinking skills. ( )
6. Mobile devices can extend the learning of students outside of the classroom. ( )
7. It is difficult to create short videos using mobile devices. ( )
8. Modern mobile devices function by touch. ( )
9. Small screens can make viewing complex graphics difficult. ( )
10. E-readers are used to create graphs and videos. ( )
11. Mobile devices can be held only in portrait mode. ( )
12. Easy access to information using mobile devices has increased people's attention span. ( )
13. Technology can help homebound individuals connect with education providers. ( )
14. Assistive technology has no effect on people of determination. ( )

3 Complete the following sentences using the words between the brackets:

(E-readers – speech assistance – Mobile devices – QR codes – post-it walls)

1. .... are portable and can be held in landscape or portrait mode.
2. Scanning .... helps students access information quickly and easily.
3. .... look like tablets, but are mainly used for reading books.
4. A .... app can help a non-verbal student participate in a class.
5. Online .... on mobile devices provide greater opportunities for collaboration between students.

Lesson 7 Mobile Operating Systems

Operating system (OS): It is the software that manages a computer's functions, such as memory, drives, printers, and other devices.

نظام التشغيل: هو البرنامج الذي يدير وظائف الكمبيوتر مثل الذاكرة ومُحرِّكات الأقراص والطابعات والأجهزة الأخرى.

- The operating system also manages accessible devices, such as screen readers and magnifiers.
- It runs a computer's software and hardware.
- It acts as a translator, allowing a user to communicate with the computer without knowing computer languages.

• نظام التشغيل يدير أيضًا الأجهزة المُساعِدة مثل قارئات ومكبِّرات الشاشة.

• كما أنه يدير برامج وأجهزة الكمبيوتر ويعمل مترجمًا، وهذا يُمكِّن المُستخدِم من التواصل مع الكمبيوتر من دون الحاجة إلى معرفة لغاته.

Computer Operating Systems

- Most computers come pre-loaded with an operating system, such as:

• تأتي معظم أجهزة الكمبيوتر مُحمَّلة مسبقًا بنظام تشغيل مثل:

1 Microsoft Windows
- It's the most popular worldwide.
- It's used on 75% of computers.



2 MacOS
- It runs on Apple computers.
- It's used on 15% of the world market.





3 Linux and Chrome OS
- It's used on about 2-3% of the market.



Mobile Operating Systems

- Mobile devices have mobile operating systems.

Android	Apple iOS
• The most popular worldwide	• Runs on iPhone
• Used on 72% of the world market	• Used on 27% of the world market
• Open-source operating system	• Closed-source operating system

- Android uses open-source software, which means the programming code can be read or changed by anyone.
- Apple's iOS is closed, which means it can't be seen or changed by the public.
- Both Android and iOS perform the same basic functions, such as messaging, web access, video chat and touch functions.

• أندرويد برنامج مفتوح المصدر؛ ما يعني أنه يمكن لأيِّ شخص قراءة شفرة البرمجة أو تغييرها.

• في حين لا يمكن لعامة الناس رؤية شفرة البرمجة الخاصة بنظام تشغيل Apple iOS المغلق أو تغييرها.

• يؤدِّي كلٌّ من نظام أندرويد ونظام تشغيل iOS الوظائف الأساسية نفسها؛ مثل: إرسال الرسائل، والاتصال بشبكة الإنترنت، والدردشة عبر الفيديو، والعمل بخاصية اللمس.

Cutting-Edge Operating Systems

- Other types of operating systems power (run) different types of cutting-edge technologies.

For example:

1. The Robot Operating System (ROS): is open-source software for building robot applications.
2. There are multiple operating systems powering self-driving cars, including those developed by Apple, Microsoft, and Google, as well as individual car companies.

أنظمة التشغيل المُتطوِّرة:

• تُشغِّل أنواع أخرى من أنظمة التشغيل أنواعًا مختلفة من التكنولوجيات المتطوِّرة، على سبيل المثال:

نظام تشغيل الروبوت، وهو برنامج مفتوح المصدر لبناء تطبيقات الروبوت.

• وهناك العديد من أنظمة التشغيل التي تُشغِّل السيارات ذاتية القيادة، وتتضمَّن تلك التي طوَّرتها شركات أبل، ومايكروسوفت وجوجل، وكذلك شركات السيارات الخاصة.



Programming Languages

Programming languages

- Instructions for a computer are given in **code**.

• لغات البرمجة تُعطي الأوامر لجهاز الكمبيوتر على هيئة شفرة.

- Over time, programming languages have evolved from simple machine language (binary) to high-level human-like languages.
- Computer languages often share similarities, so once you learn one, it is easier to learn others.
- Programmers choose a language based on the purpose.
- Programming languages are usually open source. Anyone can see, modify, or distribute the code.
- Programmers use Hyper Text Markup Language (HTML) to create web pages.

• وبمرور الوقت، تطوَّرت لغات البرمجة من لغة الآلة البسيطة (النظام الثنائي) إلى لغات عالية المستوى شبيهة باللغة التي يفهمها البشر. وغالبًا ما تتشابه لغات الكمبيوتر؛ لذلك بمجرد أن تتعلم لغة واحدة، يتيسَّر لك تعلُّم اللغات الأخرى.

• يختار المبرمجون اللغة المناسبة بناءً على الهدف. وعادةً ما تكون لغات البرمجة مفتوحة المصدر؛ حيث يمكن لأيِّ شخص رؤية الشفرة أو تعديلها أو توزيعها لإنشاء صفحات الويب.

HTML

- HTML is commonly chosen for **website creation** because it is easy to learn, use, and make changes.
- It allows creators to add elements such as **texts**, **links**, **images**, **audios**, and even **videos** to their web pages.
- It is **compatible** with all the major web browsers.

• يشيع اختيار HTML لإنشاء مواقع الويب؛ لأنها سهلة التعلم والاستخدام وإجراء التغييرات.

• تسمح هذه اللغة للمبتكرين بإضافة عناصر مثل: النصوص، والروابط، والصور، والمقاطع الصوتية، ومقاطع الفيديو، إلى صفحات الويب الخاصة بهم، وهي ملائمة لكل مُتصفِّحات الويب الكبرى.

- Most computers and apps function well regardless of the operating system and programming language used.
- You may develop preferences over time, but you're most likely to notice differences when you directly compare how a website or an app looks on different devices or on different operating systems.

• تعمل معظم أجهزة الكمبيوتر والتطبيقات بشكل جيِّد؛ بغض النظر عن نظام التشغيل ولغة البرمجة المُستخدَمة. وبمرور الوقت، قد يصبح لديك تفضيلات، ولكن من المرجَّح أن تلاحظ اختلافات عندما تقارن بصورة مباشرة بين شكل موقع إلكتروني أو تطبيق على الأجهزة المختلفة أو على أنظمة تشغيل مختلفة.

Exercises on Lesson 7

1 Choose the correct answer:

1. The .... is the software that manages a computer's functions.
   a. programming language b. operating system c. Excel
2. The most popular operating system for computers worldwide is ....
   a. Android b. macOS c. Windows
3. The most popular operating system for mobiles worldwide is ....
   a. Windows b. Android c. Apple iOS
4. The .... runs a computer's software and hardware.
   a. operating system b. CPU c. hardware
5. Instructions for a computer are given in the form of a/an ....
   a. word file b. code c. audio
6. The .... allows a user to communicate with the computer without knowing computer languages.
   a. operating system b. hardware c. compiler
7. .... is the mobile operating system that runs on iPhone.
   a. Android b. iOS c. Linux
8. .... is an operating system for Apple computers.
   a. Windows b. macOS c. iOS
9. .... manages accessible devices, such as screen readers and magnifiers.
   a. Windows b. Word c. The hardware
10. MacOS is an operating system developed by ....
    a. Microsoft b. Apple c. Google
11. Windows is an operating system developed by ....
    a. Microsoft b. Apple c. Google

Theme 1

12. There are many operating systems for computers, such as Windows and ....
a. iOS b. Android c. Linux

13. .... is an open-source operating system for mobile devices.
a. Android b. iOS c. macOS

14. .... is a closed-source operating system for mobile devices.
a. Android b. Apple iOS c. Windows

15. .... software means that the programming code can be read or changed by anyone.
a. Open-source b. Closed-source c. Both of the previous

16. .... is an open-source software for building robot applications.
a. iOS b. ROS c. Android

17. Programming languages have evolved from .... to high-level languages.
a. machine languages b. very high languages c. mild languages

18. One of the functions of mobile operating systems is ....
a. messaging b. touch c. both of the previous

2 Put (✓) or (✗):

1. Most computers come preloaded with an operating system. ( )
2. Accessing the web is not one of the basic functions of operating systems. ( )
3. Android is an open-source operating system. ( )
4. Linux is the most popular operating system all over the world. ( )
5. HTML is commonly used to create web pages. ( )
6. Operating systems manage software only. ( )
7. The operating systems Android and iOS perform the same basic functions. ( )
8. Windows is open-source software that can be edited by anyone. ( )

Lesson 7

9. Programmers choose a language based on the purpose of the program. ( )
10. Windows is an operating system used on 15% of computers. ( )
11. Apple iOS is closed-source software which cannot be changed by the public. ( )
12. The similarities between programming languages make them easy to learn. ( )
13. Self-driving cars don't need operating systems to perform. ( )
14. Programming languages are usually closed sources. ( )
15. Closed-source software means the code can be read and changed by anyone. ( )
16. HTML isn't compatible with all the major web browsers. ( )
17. There are multiple operating systems powering self-driving cars. ( )

3 Choose from column (A) what suits it in column (B):

Column (A)	Column (B)
1. MacOS	a. means that anyone can view and modify the software.
2. iOS	b. is the most popular mobile operating system worldwide.
3. The operating system	c. runs on iPhone and is used on 27% of the world market.
4. Open-source software	d. is an operating system for Apple computers.
5. Android	e. is the software that manages a computer's functions.

1. .... 2. .... 3. .... 4. .... 5. ....

Lesson 8

Website Design

HTML Tags

HTML

- Hyper Text Markup Language (HTML) is the standard programming language used to create static web pages.
- It describes the structure of a web page.

• هي لغة البرمجة القياسية المُستخدَمة في إنشاء صفحات الويب، وهي تصف هيكل صفحة الويب.

HTML Elements

HTML consists of a series of elements, such as:

Headings | Paragraphs | Links | Images

- These are the building blocks of web pages.

• HTML تتكوَّن من سلسلة من العناصر الأساسية لإنشاء هذه الصفحة، مثل: العناوين، والفقرات، والروابط، والصور.
• هذه هي المُكوِّنات الأساسية لصفحات الويب.

- Web browsers read HTML documents and display the content according to the HTML tag.

Tags have three main parts:

An opening tag | The content | A closing tag

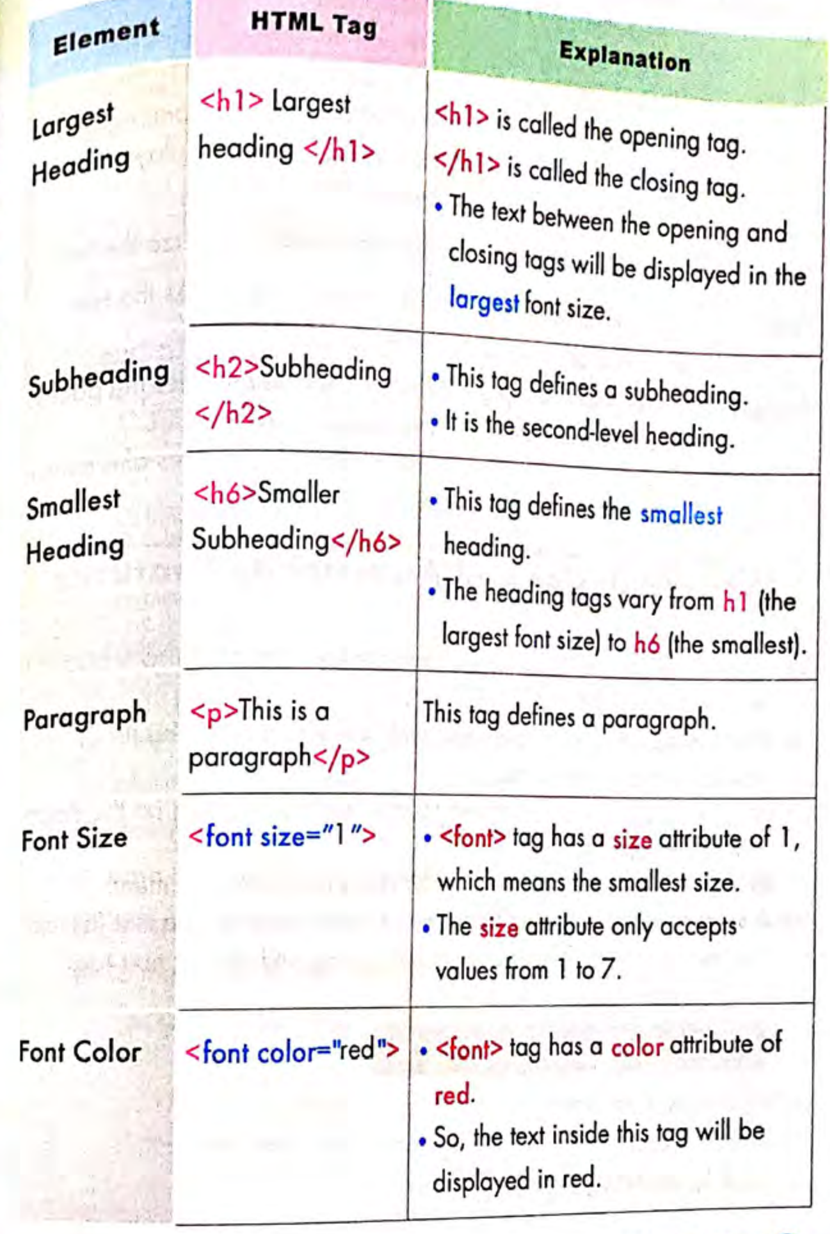
• تقرأ مُتصفِّحات الويب مستندات مكتوبة بلغة HTML، وتعرض المحتوى وفقًا لوسم HTML، وتتكوَّن الوسوم من ثلاثة أجزاء رئيسية: وسم البداية، والمحتوى، ووسم النهاية.

Explanatory Information

معلومات توضيحية إضافية خارج الكتاب المدرسي

While many HTML tags consist of an opening and a closing tag, some tags known as void elements only have an opening tag. An example of void elements is <img>.

- Some examples for HTML tags:



Element	HTML Tag	Explanation
Largest Heading	Largest heading	is called the opening tag. is called the closing tag. • The text between the opening and closing tags will be displayed in the largest font size.
Subheading	Subheading	• This tag defines a subheading. • It is the second-level heading.
Smallest Heading	Smaller Subheading	• This tag defines the smallest heading. • The heading tags vary from h1 (the largest font size) to h6 (the smallest).
Paragraph	This is a paragraph	This tag defines a paragraph.
Font Size	<font size="1">	• <font> tag has a size attribute of 1, which means the smallest size. • The size attribute only accepts values from 1 to 7.
Font Color	<font color="red">	• <font> tag has a color attribute of red. • So, the text inside this tag will be displayed in red.

Hyperlink	 Visit EKB 	• The <a> tag is used to create a hyperlink. • The href attribute specifies the URL of the link. • The text between the opening and closing tags will be displayed as the hyperlink.
Italics	<i>Italics text</i>	• <i> tag is used to italicize the text.
Bold	Bold text 	• The <strong> tag makes the text bold.
Image	<img src="car.jpg" alt="self-driving car">	• The src attribute provides the path to the image. • The alt attribute provides alternative text for the image.

Website Design and Accessibility Features

- HTML elements **break up** web pages to make them easier to scan, read, and navigate.
- **HTML code** can also help **people with low vision** to distinguish between parts of a web page.
  1. **Without HTML tags**, a screen reader **reads** everything on the page without stopping.
  2. **With HTML tags**, a screen reader **stops** after every element.
- **A screen reader** will describe an **image** only if an alternate text (alt text) has been included. This requires an **image tag** and an "**alt text tag**."

To see web page alt-text:

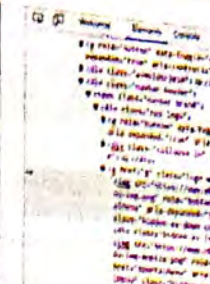
1. Right-click on an image.
2. Select "**inspect.**"
3. Look for the HTML tag "alt."











تصميم موقع إلكتروني ومزايا إمكانية الوصول:

• تُقسِّم عناصر لغة HTML صفحات الويب؛ لتسهيل إمعان النظر فيها وقراءتها وتصفُّحها.

• تساعد شفرة لغة HTML أيضًا الأشخاص ضعاف البصر على التمييز بين أجزاء صفحة الويب.

• فمن دون وسوم لغة ترميز النص التشعبي، يقرأ قارئ الشاشة كل شيء معروض على الصفحة من دون توقُّف.

• وباستخدام وسوم لغة ترميز النص التشعبي، يتوقَّف قارئ الشاشة بعد كلُ عنصر.

• ولن تصف شفرة لغة HTML صورة إلا إذا أُدرجت شفرة النص البديل، وهذا يتطلَّب وَسم صورة ووَسم النصّ البديل لمشاهدة النص البديل لصفحة الويب، انقر بزر الماوس الأيمن على إحدى الصور وحدِّد «فحص». ابحث عن علامة «alt».

NOTES:

1. **A large heading** at the top of the page **catches the attention.**
2. **Subheadings** make the text easy to scan, so a reader can find the information they want.
3. **Text** broken up into **paragraphs** makes it easy for the reader to scan for the information they want.
4. **Images** also **attract the attention** and can trigger different emotions.
5. To make the images accessible, add **image** and **alt-text tags.**

• العنوان الكبير في أعلى الصفحة يلفت الانتباه، والعناوين الفرعية تجعل النص من السهل مسحه ضوئيًا؛ حتى يتمكَّن القارئ من العثور على المعلومات التي يريدها.

• النص المقسم إلى فقرات يجعل من السهل على القارئ مسح المعلومات التي يريدها.

• تجذب الصور أيضًا الانتباه، ويمكن أن تثير مشاعر مختلفة، ولتسهيل الوصول إلى الصور، أضف علامات الصور والنص البديل.

Exercises on Lesson 8

1 Choose the correct answer:

1. HTML consists of a series of elements, such as links, images and ....
   a. headings b. paragraphs c. both of the previous
2. .... is the standard programming language used to create web pages.
   a. HTML b. Python c. C++
3. The HTML tag that is used to create a paragraph is ....
   a. <h> b. <a> c. <p>
4. HTML tags have .... main parts.
   a. two b. three c. four
5. To make the images accessible on web pages, add .... to <img> in HTML.
   a. alt-text b. meta c. title
6. The .... tag is used to create the largest heading in HTML.
   a. <h1> b. <h6> c. <L1>
7. To create the smallest heading in HTML, use the .... tag.
   a. <h1> b. <h6> c. <S1>
8. Large headings are placed at the .... of the web page to catch the attention.
   a. middle b. bottom c. top
9. The .... tag is used to create a hyperlink in HTML.
   a. <a> b. <h> c. <L>
10. HTML tags consist of an opening tag, a closing tag and ....
    a. the content b. comments c. attributes
11. The .... tag is used to italicize a text in HTML.
    a. <h> b. <b> c. <i>
12. To see web page alt-text, right click on an image and select ....
    a. open b. inspect c. properties
13. To make the text bold in HTML, you can use .... tag.
    a. <bold> b. <strong> c. <s>
14. .... read HTML documents and display the content according to the HTML tag.
    a. Web browsers b. Web servers c. Devices
15. The href attribute is used with <a> tag to create a/an .... in HTML.
    a. paragraph b. image c. hyperlink
16. With HTML tags, a screen reader .... after every element in the web page.
    a. repeats b. stops c. continues
17. The .... attribute is used to provide alternative text for the image in HTML.
    a. href b. alt c. img
18. Adding .... to web pages make the text easy to scan, so a reader can find the information easily.
    a. images b. subheadings c. music

2 Put (✓) or (✗):

1. HTML tags consist of four main parts. ( )
2. HTML is the standard programming language used to create dynamic web pages. ( )
3. HTML includes only headings and paragraph elements. ( )
4. In HTML, the <i> tag is used to display text in italics. ( )
5. To make the text bold, you can use the <bold> tag in HTML. ( )



6. A large heading at the top of the page catches the attention. ( )
7. </h6> is an opening tag to display the smallest heading in HTML. ( )
8. Subheadings font size is larger than the heading. ( )
9. HTML code can help visually impaired people distinguish between parts of a web page. ( )
10. Web browsers have difficulty reading HTML documents. ( )
11. To make the images accessible, add image and alt-text tags. ( )
12. Without HTML tags, a screen reader stops after every element. ( )
13. The <h1> tag is used to create a paragraph in HTML. ( )
14. Adding images to web pages attracts the attention and triggers different emotions. ( )
15. <img src="car.jpg" alt="self-driving car"> is used to display the image in HTML. ( )
16. When a text is organized into paragraphs, it allows readers to find information quickly. ( )

3 Choose from column (A) what suits it in column (B):

Column (A)	Column (B)
1 <strong>	a. It defines a paragraph in HTML.
2 <h1>	b. It is used to create a hyperlink in HTML.
3 <a href= " " >	c. It is used to make the text bold in HTML.
4 <i>	d. It is used to make the text italics in HTML.
5 <p>	e. It is used to create the largest heading in HTML.

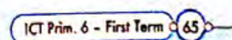
1 .... 2 .... 3 .... 4 .... 5 ....

Summary on Theme 1  Role of ICT in Our Life

Lesson 1

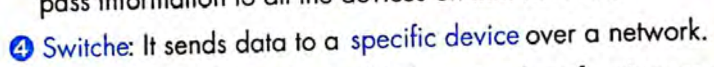
- Mr. Kartik Sawhney is a National Geographic Explorer and a computer expert.
- He uses technology to empower people of determination.
- His Bachelor's and Master's degrees in Computer Science at Stanford University, California, in the US.
- His studies focused on artificial intelligence (AI) and human-computer interaction.
- Mr. Sawhney created an app that converts graphs into audio frequencies.
- Mr. Sawhney has received national and international awards.
- Mr. Sawhney co-founded istemai.com (I-Stem) which provides software that changes digital texts into a format that can be easily used by the blind and visually impaired.
- The I-Stem platform includes mentorship and employment opportunities for people of determination.
- The platform is supported by UNICEF, Microsoft, and the National Geographic.
- Volunteer mentors can help people of determination with resume writing, job interview preparation and career-related questions.
- Egypt supports people of determination in many ways.
- There are several ways to create a website using platforms and coding languages.
- HTML is a programming language that allows web developers to arrange the various parts of their website using less codes.
- HTML is relatively easy to learn and runs on all browsers.
- HTML is best used for static web pages.
- Some websites use dynamic web design languages, such as JavaScript, PHP, or Python.
- Kartik Sawhney programs in Python, but he has also programmed in C# and C++.

html LANGUAGE



Lesson 2

- **Networks:** They are groups of people or things that are connected to each other for a common purpose.
- **Computers:** They are electronic devices that create, process and store information.
- **Types of computers:**
  1. Personal computers, such as desktop computers and laptops
  2. Mobile devices, such as smartphones, tablets and e-readers
- **Types of networks:**
  1. Wired networks: They use cables that are plugged into ports.
  2. Wireless networks: They connect devices without wiring using radio waves or Wi-Fi.
- **Network devices:**
  1. Server: It's a computer which provides services to other computers.
  2. Modem: It's a device that connects a LAN to the Internet.
  3. Hub: It allows wired devices to connect to a network and pass information to all the devices on that network.
  4. Switche: It sends data to a specific device over a network.



  5. Router: It connects a modem to different networks; it functions as a gateway.
- Switches are intelligent devices, but hubs are unintelligent.
- **Artificial intelligence (AI):** It is a machine's intelligence that can be used to solve problems.
- **Examples of AI on your devices:** navigation, voice recognition, virtual assistants, holograms
- **Holograms:** It is a 3-dimensional (3D) image that you can see without the use of special glasses or equipment.
- If you look at a regular 3D image without special 3D glasses, it will appear as a 2D image.

Lesson 3

- **Augmented reality (AR)** combines the real world with a virtual world by adding computer-generated images.
- **Virtual reality:** It is a simulated 3D environment that allows users to explore and interact with the surroundings, as if they were in reality.
- To experience VR, users wear a VR headset that provides 360-degree views.
- A cardboard VR headset is an inexpensive way to experience VR.
- **Artificial intelligence (AI):** It is the ability of a machine such, as a computer, to think and learn.
- **Example of using AI:** A smartphone or email program that predicts the next word, facial recognition, filtering spam mail and matching a paying passenger with an available driver.
- Futuristic technologies can improve the lives of people of determination.

Lesson 4

- **Cutting edge technology:** It's the newest and most advanced version of a service or product, such as: artificial intelligence (AI), augmented reality (AR) and virtual reality (VR).
- **Assistive technology:** It helps people of determination with tasks they find challenging, such as: screen magnification software, hearing aids, speech-to-text and text-to-speech programs.
- **Smartgloves:** They empower deaf people to translate their signs in real time to spoken or text output.
- **User experiences:** Describe how people use and interact with a product, and how they evaluate their experiences. It may be positive or negative.
- There are 7 factors that affect UX in the opposite figure.
- User experience is interlinked with the development of products and services.
- The goal of cutting-edge assistive technology is to improve someone's independence and to be included in society.

Lesson 5

Command / OS	Copy	Cut	Paste
• Windows	• Ctrl + C	• Ctrl + X	• Ctrl + V
• MacOS	• Cmd + C	• Cmd + X	• Cmd + V

- Search engines help people to search Internet websites based on the keywords and phrases.
- They are user-friendly, very fast, and often give many results.
- Databases: They are collections of information which are typically stored in a computer system and can be accessed, for free, through a school or library.
- A database is a good place to search for information from journals, newspapers, and reference books.

General Database	Subject Database
• It covers many subjects. • EX: EKB	• It covers only one subject, such as business or law. • Any results will be specific to your topic.

- Library catalog: It is a database which includes all the items owned by a library.
- When you search any database:

1. Use a keyword search.
2. Review the results.
3. You can narrow a search by using fields like author or journal title.

Lesson 6

- Mobile devices include smartphones, tablets, and e-readers.

Smartphones and Tablets	E-readers
• They surf the web and check emails. • They often have high-quality cameras, speakers, and screen resolution.	• They look like tablets, but are mainly used for reading books.

- Mobile devices are portable and can access the Internet and function by touch.
- They can be held in landscape or portrait mode, laid flat.
- Mobile devices help students in learning beyond the classroom, for example:

1. Creating short videos or taking photos for projects.
2. Scanning QR codes to access content.
3. Using online post-it walls, shared class forums, or group chats.
4. Listening to podcasts, reviews of video games, and accessing learning apps.

- Some say easy access to information has decreased the thinking skills, social interaction and people's attention span.
- Small screens can make reading and viewing graphics difficult.
- A speech assistance app can help a non-verbal student participate in a class, where people can buy and sell products.

Lesson 7

- Operating system (OS): It is the software that manages a computer's functions. such as memory, drives, printers, and other devices.
- OS manages accessible devices, such as screen readers and magnifiers.
- OS runs a computer's software and hardware.
- OS acts as a translator; it translates user communication to computer languages.
- Computer operating systems:

Microsoft Windows	MacOS	Linux and Chrome OS
• It's the most popular worldwide. • It's used on 75% of computers.	• It runs on Apple computers. • It's used on 15% of the world market.	• It's used on about 2-3% of the market.

SUMMARY on Theme 1

Mobile operating systems:

Android	Apple iOS
• The most popular worldwide • Used on 72% of the world market • Open-source operating system	• Runs on iPhone • Used on 27% of the world market • Closed-source operating system

- Cutting-edge operating systems:
  1. The Robot Operating System (ROS): is an open-source software for building robot applications.
  2. Operating systems powering self-driving cars
- Programming languages: Instructions to a computer are given in codes.
- Programming languages have evolved from simple machine language (binary) to high-level human-like languages.
- Programming languages are usually open-source.
- HTML is compatible with all the major web browsers.

Lesson 8

- Hyper Text Markup Language (HTML) is the standard programming language used to create static web pages.
- HTML consists of a series of elements such as: headings, paragraphs, links and images.
- Web browsers read HTML documents and display the content according to the HTML tag.
- HTML tags have three main parts: an opening tag, the content and a closing tag.
- Without HTML tags, a screen reader reads everything on the page without stopping.
- With HTML tags, a screen reader stops after every element.
- A screen reader will describe an image only if alternate text (alt text) has been included.
- Images and large headings at the top of the page catches the attention.
- Subheadings make the text easy to scan.
- Text broken up into paragraphs makes it easy for the reader to scan the information.

Revision on Theme 1 Role of ICT in Our Life



Model Exam 1

1 Choose the correct answer:

1. .... technology helps people of determination with tasks they find challenging.
   a. Assistive b. Cutting-edge c. Virtual
2. HTML is used to create .... web pages.
   a. static b. dynamic c. both of them
3. .... are computers that have large amounts of data storage.
   a. Switches b. Servers c. Hubs
4. Instructions to a computer are given in the form of a ....
   a. Word file b. code c. video
5. .... databases cover only one subject, such as business or law.
   a. Electronic b. General c. Subject

2 Put (✓) or (✗):

1. Wireless networks connect devices with physical wiring and cables. ( )
2. Artificial intelligence is one of the cutting-edge technologies. ( )
3. Self-driving cars don't need an operating system to perform. ( )
4. To make the images accessible, add the image and alt-text tags. ( )
5. A cardboard VR headset is an expensive way to experience virtual reality. ( )

3 Complete the following sentences from the words between the brackets:

(cut - E-readers - post-it walls - EKB - Smartgloves)

1. .... is an example of a general database.
2. .... look like tablets, but are mainly used for reading books.

3. The shortcut "Ctrl + X" is used to .... text in windows.
4. .... translate sign language to speech or text.
5. Online .... on mobile devices provide greater opportunities for collaboration between students.

Model Exam 2

1 Choose the correct answer:

1. .... pass information to a specific device over a network.
   a. Switches b. Hubs c. Modems
2. .... is an operating system for Apple computers.
   a. Windows b. MacOS c. iOS
3. Kartik Sawhney studied .... in his Bachelor's and Master's degree
   a. Computer Hardware b. Computer Science c. Science
4. To experience virtual reality, users often wear ....
   a. 3D glasses b. VR headsets c. AR headsets
5. You can use mobile devices to scan .... and access related video, audio, and texts.
   a. PIN codes b. podcasts c. QR codes

2 Put (✓) or (✗):

1. Futuristic technologies can't improve the lives of people of determination. ( )
2. Modern mobile devices function by touch. ( )
3. To make a text bold, you can use <bold> tag in HTML. ( )
4. Assistive technology helps people of determination to be included in society. ( )
5. User experience is always positive. ( )

3 Choose from column (A) what suits it in column (B):

Column (A)	Column (B)
1 MacOS	a. cover only one subject and any results will be specific to your topic.
2 QR codes:	b. are how people feel about a product.
3 Subject databases	c. Scanning it can help students to access information quickly and easily.
4 User experiences	d. is an operating system for Apple computers.
5 Futuristic technology:	e. such as artificial intelligence, augmented reality and virtual reality.

1 ...... 2 ...... 3 ...... 4 ...... 5 ......

Model Exam 3

1 Choose the correct answer:

1. Blind people can listen to texts uploaded to istemai platform using ....
   a. braille terminal b. screen readers c. hearing aids
2. The HTML tag that is used to create a paragraph is ....
   a. <h> b. <a> c. <p>
3. .... connect devices to a network and send data to all devices.
   a. Switches b. Hubs c. Modems
4. You can use the shortcut "Ctrl + C" to ...... a text or an image in Windows.
   a. copy b. cut c. paste
5. .... are used to surf the web and check emails, like PCs.
   a. Smartphones and tablets
   b. Cameras and speakers
   c. Keyboards

2 Put (✓) or (✗):

1. HTML is used for creating dynamic web pages. ( )
2. Augmented reality helps students become active participants in learning. ( )
3. Cutting-edge assistive technology has no effect on people of determination. ( )
4. Android is an open-source operating system. ( )
5. EKB is an inaccurate source of information. ( )

3 Complete the following sentences from the words between the brackets:

(Cutting-edge technology - Library catalog - iOS - Assistive technology - Android)

1. .... helps people of determination with tasks they find challenging.
2. .... runs on iPhone and is used on 27% of the world market.
3. .... is a database which includes all the items owned by a library.
4. .... is the most popular mobile operating systems worldwide.
5. .... is the latest and most advanced technology.

Model Exam 4

1 Choose the correct answer:

1. A computer learns by .... provided examples.
   a. analyzing b. storing c. saving
2. .... describes how people interact with and evaluate a product.
   a. Futuristic technology b. User experience c. Virtual reality
3. The .... tag is used to create a hyperlink in HTML.
   a. <a> b. <h> c. <L>
4. When conducting a digital search, make sure the information you get is ....
   a. credible b. biased c. unreliable

5. HTML tags have .... main parts.
   a. two b. three c. four

2 Put (✓) or (✗):

1. Windows is an operating system used on 15 % of computers. ( )
2. Subheadings font size is larger than headings. ( )
3. The Miracle Child "Rania Saleh" is a programmer with Down Syndrome. ( )
4. The shortcut "Cmd + X" is used to cut a text or an image in Windows. ( )
5. It is recommended to use a keyword to conduct a database search. ( )

3 Complete the following sentences from the words between the brackets:

(VR - AR - Mobile devices - AI - HTML)

1. .... is a simulated 3D environment that allows users to interact with the surroundings.
2. .... is the ability of a machine to think and learn.
3. .... are portable and can be held in landscape or portrait mode.
4. .... adds computer-generated images to show a 3D model of what looks like the real world.
5. .... is the standard programming language used to create web pages.

Model Exam 5

1 Choose the correct answer:

1. .... is a machine's intelligence that can be used to solve problems.
   a. Artificial intelligence b. Hologram c. Switch
2. .... work as gateways and connect a modem to different networks.
   a. Switches b. Hubs c. Routers

3. To make the text bold in HTML, you can use .... tag.
   a. <bold> b. <strong> c. <s>
4. A 3D image that you can see without the use of special glasses is called ....
   a. artificial intelligence b. hologram c. navigation
5. Mobile devices can be used in .... mode depending on the required task.
   a. portrait b. landscape c. both of them

2 Put (✓) or (✗):

1. Kartik Sawhney is a computer expert. (   )
2. There is no difference between smartphones and e-readers. (   )
3. Artificial intelligence can run in the background of programs to filter spam mails. (   )
4. Operating systems manage only software. (   )
5. Windows is an open-source software which can be edited by anyone. (   )

3 Choose from column (A) what suits it in column (B):

Column (A)	Column (B)
1 EKB	a. is used to create the smallest heading in HTML.
2 <h1>	b. is an open-source operating system for mobile devices.
3 Android	c. is an example of a general database.
4 Search engines	d. are used to search on the Internet using keywords.
5 <h6>	e. is used to create the largest heading in HTML.

1 .... 2 .... 3 .... 4 .... 5 ....



Theme 2 Digital Safety and Security Precautions

Theme Lessons:

Lesson 1 Explorer in Action

Raghda (Didi) El-Behaedi



- She is a National Geographic Explorer.
- She is working towards a PhD in Egyptian Archaeology at the University of Chicago in the US.
- Ms. El-Behaedi has worked as a remote sensing research consultant at NASA.

• الآنسة ديدي البيحايدي مُستكشِفة في ناشونال جيوجرافيك.
• وهي تعمل من أجل الحصول على الدكتوراه في علم الآثار المصرية بجامعة شيكاغو بأمريكا.
• كما عملت الآنسة البيحايدي بصفتها خبيرًا استشاريًا في مجال أبحاث الاستشعار عن بُعد في وكالة ناسا الفضائية.

Ms. Didi's uses technologies in her work.



1 Geospatial Technologies



- Ms. Didi uses geospatial technologies, such as:
  1. Geographic Information System (GIS)
  2. Remote Sensing (RS)
  3. Global Positioning System (GPS) in her work
- These technologies assist in the geographic mapping and analysis of Earth and human societies.
- She has excavated several archaeological sites in the US, France, and Egypt.
- She is also the co-director of the Memphis-Kom el-Fakhry Archaeological Project (Egypt).
- She has been working in the area of Lake Moeris in Fayum, Egypt, to learn how ancient Egyptians dealt with the decreasing amount of water in the lake.

• الآنسة ديدي تَستخدم تقنيات الجغرافيا المكانية في عملها مثل: GIS, RS, GPS، وتساعد هذه التقنيات في رسم الخرائط الجغرافية للأرض وتحليل الأرض والمجتمعات البشرية.
• نقَّبت الآنسة ديدي في العديد من المواقع الأثرية في كلٍّ من الولايات المتحدة الأمريكية وفرنسا ومصر.
• وهي أيضًا المدير المُشارِك في مشروع كوم الفخري في مدينة ممفيس بمصر.
• وقد عملت أيضًا في منطقة بركة قارون (بحيرة موريس) في محافظة الفيوم بمصر؛ من أجل معرفة كيفية تعامُل المصريين القدماء مع انخفاض نسبة المياه في البحيرة.



2 Remote Sensing

- Ms. El-Behaedi uses remote sensors in her work.
- The remote sensors are special cameras placed on satellites, drones, and planes that collect electromagnetic radiation reflected from the Earth's surface.
- The remote sensors provide extremely clear images of the ground's surface.
- Ms. El-Behaedi uses the images to identify, map, and date the ancient shores of the lake and find previously undiscovered ancient settlements.

• الآنسة البيحايدي تَستخدم دائمًا أجهزة الاستشعار عن بُعد في عملها. أجهزة الاستشعار عن بُعد هي كاميرات خاصَّة يمكن وضعها على أقمار صناعية أو طائرات من دون طيار وطائرات عادية، وتقوم بجمع الإشعاع الكهرومغناطيسي المنعكس من سطح الأرض.
• تُقدِّم أجهزة الاستشعار عن بُعد صورًا فائقة الوضوح لسطح الأرض، وتستخدم الآنسة البيحايدي تلك الصور لتحديد شواطئ البحيرة القديمة، ورسم خرائطها، وتحديد تاريخها، والعثور على مستوطنات قديمة لم تُكتشَف من قبل.



Explanatory Information

معلومات توضيحية إضافية خارج الكتاب المدرسي

- Geospatial technologies are tools that help us understand the world around us by collecting, analyzing, and visualizing location data. Here are some specific examples of geospatial technologies:
- Geographic Information System (GIS): GIS is a software program that allows us to store, analyze, and visualize information about places. You can use GIS to do things like finding the shortest path between two points.
- Remote Sensing (RS) is a way of collecting information about an area from far away using special cameras and sensors on satellites and airplanes.
- Global Positioning System (GPS) is used to find locations; it is commonly used in navigation systems like those in cars and smartphones.

Theme 2

3 Machine Learning



- Ms. El-Behaedi uses computers to find previously unknown archaeological sites by inputting data about known archaeological sites and programming the computer to look for similar sites.
- This is called "machine learning".
- **Example on machine learning:** If you have used YouTube and received suggestions for other videos you might like. Those videos show up through a data search based on other views.

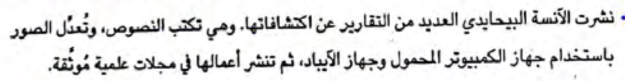
• تستخدم الآنسة البيحايدي أجهزة الكمبيوتر لتحليل البيانات والتنبُؤ بالأماكن التي قد تجد فيها مواقع أثرية مجهولة من قبل، وهي تُدخل بيانات حول المواقع الأثرية المعروفة، ثم تُبرمج جهاز الكمبيوتر للبحث عن مواقع مماثلة، وهذا ما يُسمَّى «التعلُّم الآلي».

• مثال على تعلُّم الآلة: إذا سبق لك استخدام موقع يوتيوب وتلقَّيت اقتراحًا لمقاطع فيديو أخرى قد تعجبك؛ إذ تظهر مقاطع الفيديو هذه من خلال البحث عن البيانات بناءً على مشاهد أخرى.

4 Laptop and iPad



- Ms. El-Behaedi has published several reports on her discoveries.
- She writes her texts, creates figures, and edits images using her laptop and iPad, then she publishes her work in trusted journals.



• نشرت الآنسة البيحايدي العديد من التقارير عن اكتشافاتها، وهي تكتب النصوص، وتُعدِّل الصور باستخدام جهاز الكمبيوتر المحمول وجهاز الآيباد، ثم تنشر أعمالها في مجلات علمية مُوثَّقة.

How does Ms. El-Behaedi protect her information?

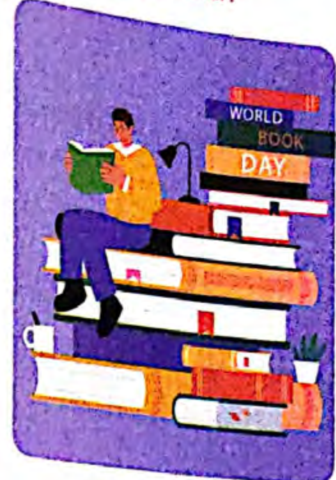
Ms. El-Behaedi protects her information by:

- Installing an antivirus
- Using strong passwords
- Backing up data frequently

• ولكي تحمي الآنسة البيحايدي معلوماتها، تستخدم برامج مكافحة الفيروسات، وكلمات مرور قوية على أجهزتها، كما تحرص على إجراء نَسخ احتياطي لبياناتها بانتظام.

Lesson 1

The characteristics of Ms. El-Behaedi as an integral scholar:



1. Learning from other scholars.
2. She reads articles in trusted digital libraries and academic journals to ensure information is correct.
3. If she refers to other scholars' works in her reports, she uses citations.
4. To use images or infographics, she contacts the individual or the institution to ask for permission.

• صفات الآنسة البيحايدي بصفتها باحثة متميزة:

1. التعلُّم من الباحثين الآخرين.
2. تقرأ مقالات منشورة في المكتبات الرقمية والمجلات الأكاديمية الموثوقة التي راجعها باحثون آخرون؛ لتضمن أن المعلومات صحيحة.
3. وعندما تشير الآنسة البيحايدي إلى أعمال باحثين آخرين في تقاريرها، فإنها تستخدم التوثيق.
4. وكذلك عند استخدامها صورًا أو رسومات بيانية خاصة بأحد الأشخاص أو المؤسسات، فإنها تتواصل معهم لطلب الإذن.

- Ms. El-Behaedi intends to use the knowledge she has gained in her excavations to help preserve Egypt's cultural heritage.
- Because of these important works, like Ms. El-Behaedi's work, we can learn more about our history and how our ancestors dealt with environmental changes.
- Solutions for the past problems could help us solve future issues.

• تعتزم الآنسة البيحايدي استخدام المعرفة والخبرة التي اكتسبتها من خلال عمليات التنقيب التي أجرتها سابقًا؛ للمساعدة في الحفاظ على التراث الثقافي لمصر. ومن خلال الأعمال المهمة، مثل التي تؤدِّيها الآنسة البيحايدي، يمكننا معرفة المزيد عن تاريخنا، وكيفية تعامُل أسلافنا مع التغيُّرات البيئية. كما يمكن أن تساعدنا حلول المشكلات الماضية في حلِّ المشكلات التي تطرأ في المستقبل.

Theme 2

JavaScript



- There are several programming languages that can be used to create an application.
- Creators like Ms. Didi El-Behaedi prefer to use **JavaScript** for many reasons:
  1. It works on all personal computers and mobile phones.
  2. It can be used with other programming languages, such as HTML.
  3. It makes web pages interactive with dynamic content, animations, pop-up menus, and clickable buttons.

> JavaScript was used to build **YouTube**, **Facebook**, **Amazon**, and other websites and applications that engage users.

- During an internship at NASA LaRC, Ms. El-Behaedi and her team coded in JavaScript to create a geospatial app on Google Earth Engine which is a free platform.
- Unfortunately, no one in the team knew how to code in JavaScript.
- In a week, they learned it by:

Viewing
- YouTube videos
- Online tutorials
- Sample scripts

- The team was able to create a great geospatial app called PRISM.

- هناك العديد من لغات البرمجة التي يمكن استخدامها لإنشاء تطبيق.
- يُفضِّل المبتكرون، مثل الآنسة ديدي البيحايدي، استخدام لغة البرمجة جافاسكريبت لأسباب مُتعدِّدة. فهي تعمل على جميع أجهزة الكمبيوتر الشخصية والهواتف المحمولة، ويمكن استخدامها مع لغات البرمجة الأخرى، مثل لغة HTML، فهي تجعل صفحات الويب أكثر تفاعلية بإضفاء: محتوى ديناميكي، ورسوم مُتحرِّكة، وقوائم منبثقة، وأزرار قابلة للنقر، وقد استُخدِمت لغة البرمجة جافاسكريبت لإنشاء موقع يوتيوب وفيسبوك وأمازون ومواقع إلكترونية وتطبيقات أخرى تجذب المُستخدِمين.
- خلال فترة تدريب في مركز أبحاث ليندبيرغ التابع لوكالة ناسا، قامت السيدة البهادي وفريقها بكتابة كود في JavaScript لإنشاء تطبيق للتقنيات المكانية على Google Earth Engine وهو منصة مجانية.
- لسوء الحظ لم تكن هي أو أي عضو من فريقها يعرفون كيفية التشفير بلغة جافاسكريبت. وفي غضون أسبوع، تعلَّموا ذلك من خلال مشاهدة مقاطع فيديو على يوتيوب، وبرامج تعليمية متاحة عبر الإنترنت، ونماذج من النصوص البرمجية. وبذلك، تمكَّن الفريق من تصميم تطبيق جغرافي مكاني رائع يُسمَّى PRISM.

Exercises on Lesson 1

1 Choose the correct answer:

1. Ms. Didi El-Behaedi is a/an .... at National Geographic organization.
   a. explorer b. teacher c. programmer
2. Ms. El-Behaedi is studying to earn a PhD in .... at Chicago University.
   a. Artificial Intelligence b. Egyptian Archaeology c. Computer Science
3. .... makes web pages interactive with dynamic content.
   a. HTML b. C++ c. JavaScript
4. Ms. El-Behaedi publishes her work in .... journals.
   a. trusted b. untrusted c. both of them
5. Ms. Didi El-Behaedi uses geospatial technologies, such as GPS and ....
   a. GIS b. Remote Sensing (RS) c. both of them
6. .... refer to the sources you used in your report.
   a. Opinions b. Citations c. Assumptions
7. The remote sensors are special .... placed on satellites, drones, and planes.
   a. cameras b. computers c. microphones
8. .... was used to build YouTube, Facebook, and Amazon.
   a. Swift b. JavaScript c. Scratch
9. Ms. Didi El-Behaedi has worked as a remote sensing .... at NASA.
   a. astronaut b. research consultant c. programmer
10. Suggestions for other videos on YouTube are considered an example of ....
    a. geospatial technologies b. remote sensing
    c. machine learning

11 Ms. El-Behaedi and her team learned JavaScript by viewing ....
a. YouTube videos b. online tutorials c. both of them

12 To use images or infographics of someone, you should ....
a. ask for permission b. share without permission
c. ignore the owner

13 Ms. El-Behaedi uses ..... to find previously unknown archaeological sites.
a. drones b. machine learning c. cameras

14 Ms. El-Behaedi's team created a geospatial app called PRISM using ..
a. HTML b. JavaScript c. Python

15 One of the characteristics of the integral scholar is the ability to .... from other scholars.
a. copy b. learn c. quote

16 Ms. El-Behaedi protects her information using ....
a. anti-virus software b. backup of data c. both of them

2 Put (✓) or (✗):

1. Ms. Didi El-Behaedi is an archaeologist. ( )
2. Machine learning is a type of artificial intelligence. ( )
3. Ms. El-Behaedi doesn't use remote sensors in her work. ( )
4. Good scholars always cite their sources. ( )
5. Ms. El-Behaedi doesn't back up her data. ( )
6. Google Earth Engine is a free, cloud-based computing platform. ( )
7. Ms. El-Behaedi publishes her work in untrusted journals. ( )
8. Geospatial technologies assist in the geographic mapping and analysis of Earth. ( )
9. The remote sensors provide clear images of the ground surface. ( )
10. Ms. El-Behaedi uses images from remote sensors to find the ancient shores of the lake. ( )
11. Articles in trusted digital libraries and academic journals are credible. ( )

12. Solutions to past problems can't help us solve future issues. ( )
13. Ms. Didi El-Behaedi is studying ancient Egyptian water management at Lake Moeris in Fayum, Egypt. ( )
14. You should use weak passwords to protect your data. ( )
15. JavaScript doesn't work on mobile phones. ( )
16. Ms. Didi El-Behaedi is working to earn a PhD in Egyptian Archaeology from Cairo University. ( )
17. Ms. Didi El-Behaedi hasn't excavated any archaeological sites in Egypt. ( )
18. Ms. El-Behaedi protects her information using many ways. ( )
19. Ms. Didi El-Behaedi is the co-director of the Memphis-Kom el-Fakhry Archaeological Project in Egypt. ( )
20. Ms. El-Behaedi uses machine learning to discover unknown archaeological sites. ( )
21. With important works, like Ms. El-Behaedi's, we can learn more about our history. ( )
22. JavaScript makes web pages interactive with animations, pop-up menus, and clickable buttons. ( )

3 Complete the following sentences using the words between the brackets:

(citations – Remote sensors – machine learning – JavaScript – Explorer)

1. Ms. El-Behaedi is a National Geographic ....
2. You should use .... to refer to others' works in your reports.
3. .... are special cameras placed on satellites, drones, and planes to collect electromagnetic radiation reflected from the Earth's surface.
4. .... makes web pages interactive with dynamic content.
5. Ms. El-Behaedi uses .... to find previously unknown archaeological sites.

Lesson 2 Using ICT Tools Responsibly

» Here are some tips on how to be a socially, intellectually, and ideologically responsible citizen online.

« فيما يلي بعض النصائح حول كيفية أن تكون مواطنًا مسئولًا اجتماعيًا وفكريًا وأيديولوجيًا على الإنترنت.

Socially:

» Sharing personal information can lead to:

1. Online and offline hacking
2. Harassment
3. Bullying

» Some behaviors can lead to hurting feelings or even legal actions, such as:

1. Disregarding people's privacy
2. Bullying
3. Not watching your tone

• اجتماعيًا: مشاركة المعلومات الشخصية يمكن أن يؤدي إلى: القرصنة عبر الإنترنت أو من دون إنترنت، والمضايقات، والتنمُّر.

• بعض السلوكيات يمكن أن تؤدي إلى إيذاء مشاعر الناس أو اتخاذ إجراءات قانونية مثل: إهمال خصوصية الناس، والتنمُّر، أو عدم مراعاة نبرة حديثك.

Intellectually:



» It's immoral to post others' ideas as your own.

» Not checking the reliability of sources can lead to the spread of misinformation.

» This type of intellectual misbehavior can cause two things:

1. Discrediting yourself.
2. Legal actions are taken against you.

• فكريًا: من غير الأخلاقي أن تنشر أفكار الآخرين على أنها أفكارك الخاصة.

• وعدم التحقُّق من مصداقية مصادرك يمكن أن يؤدي إلى انتشار المعلومات الخاطئة.

• يمكن لهذا النوع من سوء السلوك الفكري أن يُشوِّه سمعتك، وأن يؤدي أيضًا إلى اتخاذ إجراءات قانونية.

Ideologically:

» It is wonderful to be passionate about a social issue or cause. However, some behaviors lead you to not be ideologically responsible, such as:

- Harassing others
- Being pushy
- Being mean
- Unsure, or untruthful about information you share

» This type of behavior can lead people to:

1. Distrust your information now and in the future.
2. People may lose interest in the issue.



• من الرائع أن تكون شغوفًا بقضية أو هدف اجتماعي، ولكن تقودك بعض السلوكيات إلى أن تكون غير مسئول أيديولوجيًا مثل: مضايقة الآخرين، أو أن تكون انتهازيًا، أو لئيمًا، أو غير متأكد، أو غير صادق بشأن معلوماتك.

• بل يمكن لهذا النوع من السلوك أن يجعل الآخرين يفقدون الثقة بالمعلومات التي تُقدِّمها الآن وفي المستقبل، ويمكن أن يؤدي أيضًا إلى أن يَفقِد الناس اهتمامهم بالقضية.

Useful Tips

» If you are feeling uncomfortable about something online:

- Think about how you are behaving online.
- Think about how those you are communicating with are behaving.

» Irresponsible behavior, online or offline, is harmful. It can cause feelings of sadness, guilt, anxiety, and even fear.

» Let a trusted adult know if you are feeling bad and need help.

» Do not forget to log off your devices and communicate your ideas in person.

» Be respectful of your online/offline balance. It is irresponsible to put online activity over your personal relationships and your mental health.

• إذا كنت تشعر بالانزعاج من شيء ما على الإنترنت، فكِّر في السلوك الذي تتَّبعه على الإنترنت، والسلوك الذي يتَّبعه هؤلاء الذين تتواصل معهم.

• إن السلوك غير المسئول على الإنترنت أو خارجه شيء ضار، ويمكن أن يُسبِّب الشعور بالحزن، والذنب، والقلق، وحتى الخوف. أخبِر شخصًا بالغًا إذا ما كنت تشعر بالسوء أو تحتاج إلى مساعدة.

• لا تنسَ أن تُسجِّل الخروج من أجهزتك وأيضًا إيصال أفكارك وجهًا لوجه! عليك مراعاة التوازن بين وقتك على الإنترنت ووقتك خارجه. فمن عدم المسئولية أن تُفضِّل الأنشطة عبر الإنترنت على علاقاتك الخاصة وصحتك النفسية.

Theme 2

Responsibly Gaming

Playing electronic games online with friends can be a lot of fun, but you should be on the alert for some issues:



1. Cyberbullying
2. Hacking
3. Hidden fees
4. Malware

يمكن أن تكون ممارسة الألعاب الإلكترونية عبر الإنترنت مع الأصدقاء مسلية جدًا، ولكن يجب أن تكون منتبهًا لبعض المشكلات، مثل: التنمر عبر الإنترنت، والقرصنة، والتكاليف المخفية، والبرمجيات الخبيثة.

Tips to Be Safe Online

1. Only play games and chat with people you know and trust.
2. Don't put personal information, such as your full name as your username, online.
3. Don't use a web cam unless your settings are private.
4. Remember to ask a trusted adult's permission before you download or click on links to products, they might contain malware or there may be hidden charges.
5. Manage your time responsibly!

نصائح لتكون آمنًا على الإنترنت:

- العب ودردش فقط مع أشخاص تعرفهم وتثق بهم، ولا تنشر معلوماتك الشخصية، مثل وَضْع اسمك الكامل مكان اسم المُستخدِم عبر الإنترنت. لا تستخدِم كاميرا الويب إلا إذا كانت إعداداتك خصوصية.
- وتذكَّر أن تطلب إذن شخص بالغ قبل تنزيل محتوى أيّ روابط لمنتجات أو الضغط عليها؛ إذ قد تتضمَّن برمجيات خبيثة أو تكاليف مخفية.
- إضافة إلى ذلك، كُن مسئولًا بإدارة وقتك!



Exercises on Lesson 2

1 Choose the correct answer:

1. Sharing personal information online can lead to ....
   a. safety b. hacking c. both a and b
2. Balance between online and offline activities is considered a/an .... behavior.
   a. responsible b. irresponsible c. useless
3. Online gaming can be fun, but may cause ....
   a. cyberbullying b. hacking c. both a and b
4. Bullying others and disregarding their privacy is considered a/an .... irresponsible behavior
   a. socially b. intellectually c. ideologically
5. Sharing your friend's photos without their permission is a/an .... behavior.
   a. responsible b. irresponsible c. safe
6. Not evaluating the sources may lead to spread of ....
   a. accurate information b. misinformation c. facts
7. .... can lead to hurting feelings or even legal actions.
   a. Disregarding people's privacy b. Bullying
   c. Both a and b
8. If you are feeling uncomfortable about something online, you should ....
   a. continue as usual b. consider online behavior c. ignore it
9. Irresponsible behavior, online or offline can cause ....
   a. sadness, guilt, anxiety
   b. happiness and joy c. nothing
10. Intellectual misbehavior can .... you and lead to legal actions.
    a. credit b. discredit c. acknowledge.

11. It is ...... to put online activity over your personal relationships and your mental health.
   a. responsible b. irresponsible c. important
12. You should not share personal information, such as .... online.
   a. your name b. your passwords c. both a and b
13. What should you do before downloading or clicking on links to products?
   a. Ask a trusted adult's permission.
   b. Download it immediately.
   c. Ignore it.
14. Downloading or clicking on links to products may expose you to ......
   a. malware b. hidden charges c. both a and b

2 Put (✓) or (✗):

1. It's moral to post others' ideas as your own. ( )
2. Irresponsible online behavior is harmful. ( )
3. You should always remember to log off your devices. ( )
4. It is not necessary to manage your time responsibly. ( )
5. Not watching your tone when talking with your friend may hurt his feelings. ( )
6. To avoid danger, you should put personal data online. ( )
7. It is a responsible behavior to share your friends' photo without their permission. ( )
8. Checking the reliability of the sources lead to the spread of misinformation. ( )
9. Intellectual misbehavior can discredit you and also lead to legal actions. ( )
10. Harassing others, being pushy and mean lead you to be ideologically responsible. ( )
11. It is irresponsible to use a web cam without taking steps to protect your privacy. ( )

12. Being unsure or untruthful about the information you share leads you to not be ideologically responsible. ( )
13. It is not important to balance between online and offline activities. ( )
14. To be safe online, chat and play games with people you know and trust. ( )
15. You shouldn't use a web cam unless your settings are private. ( )
16. It is not important to communicate your ideas in person. ( )
17. It is a responsible behavior to download copyrighted music or movies for free. ( )

3 Complete the following sentences using the words between the brackets:

(web cam – socially – intellectually – maleware – personal information)

1. Don't share.............., such as your full name or your passwords online.
2. Don't use a .... unless your settings are private.
3. Playing online games may expose you to ....
4. Watching your tone when dealing with others is an .... responsible behavior.
5. Posting others' ideas as your own is considered an .... irresponsible behavior.



Lesson 3 Protecting Yourself From Digital Theft

- It is irresponsible to leave your devices at risk by not taking proper safety precautions.
- You have learned about the importance of strong passwords. Let's look at some more ways you can effectively protect your devices from theft.

» من عدم المسئولية أن تَترُك أجهزتك الخاصة مُعرَّضة للخطر بعدم اتخاذ إجراءات الأمان المناسبة.
» لقد تعرَّفت على أهمية كلمات المرور القوية، فلنُلقِ نظرة على المزيد من طرق حماية أجهزتك من السرقة بشكل فعال.

1 Passwords





- Passwords with 8+ random letters, numbers and symbols are the most secure.

• كلمات المرور التي تتكوَّن من ٨ حروف، وأرقام، ورموز عشوائية أو أكثر، هي الأكثر أمانًا.

2 Multi-factor Authentication (MFA)



- MFA requires at least two ways of identifying yourself.
- It is usually through passwords, pins, and security codes or personal questions.

• تتطلَّب المصادقة مُتعدِّدة العوامل طريقتين على الأقل لتحديد هُويَّتك، وعادةً ما يتم ذلك من خلال: كلمات المرور، وأرقام التعريف الشخصية، ورموز الأمان أو الأسئلة الشخصية.

3 Fingerprint Authentication



- This type of authentication will scan your finger, usually your thumb, as a way of confirming it's you.

• المصادقة ببصمة الأصابع: هذا النوع من المصادقة سيُجري مسحًا لإصبعك الإبهام عادةً، كطريقة لتأكيد هُويَّتك.

4 Facial Recognition



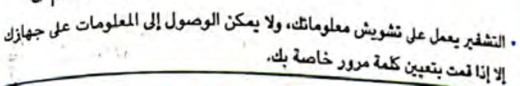
- Facial recognition software will scan your face using your device's camera.
- Only your face will allow your device or device's apps to open.

• برنامج التعرُّف على الوجه سيُجري مسحًا لوجهك باستخدام الكاميرا الخاصة بك؛ وبذلك سيسمح لوجهك دون سواه بفتح جهازك أو التطبيقات الموجودة فيه.

5 Full Disk Encryption



- Encryption scrambles your information and can only be accessed on your device if you have set a password.



• التشفير يعمل على تشويش معلوماتك، ولا يمكن الوصول إلى المعلومات على جهازك إلا إذا قمت بتعيين كلمة مرور خاصة بك.

6 Lock When Lost



- Enabling lock mode on your device will allow you to lock it if you lose it, usually by logging in to your Google or iCloud account.

• سيسمح لك وضع القفل التمكيني على جهازك بقفله إذا فقدته، عادةً عن طريق تسجيل الدخول إلى حساب Google أو iCloud بتعيين كلمة مرور خاصة بك.

Data Protection Law in Egypt

1 Companies

- Companies are in particular need to protect their websites and their customers' information.
- In 2020, Egypt formed the Data Protection Law to protect its citizens.
- Companies must report immediately if they've been victims of data theft, and let their customers know immediately as well.

• تحتاج الشركات بشكل خاص إلى حماية مواقعها الإلكترونية ومعلومات عملائها.
• في سنة ٢٠٢٠، أنشأت مصر قانون حماية البيانات الشخصية لحماية مواطنيها.
• يجب على الشركات الإبلاغ على الفور إذا وقعوا ضحية لسرقة البيانات، وإعلام عملائهم مباشرة أيضًا.



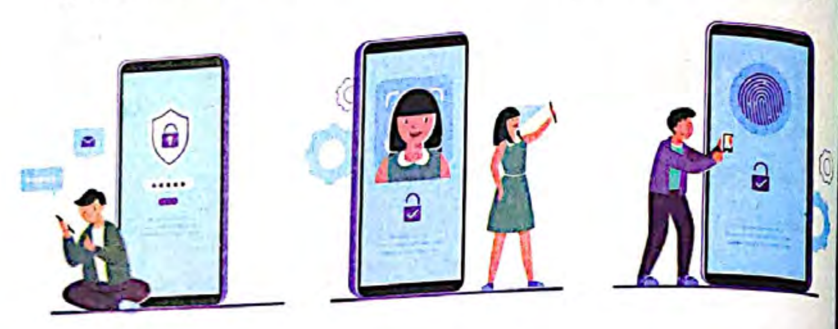
Theme 2

2 Individuals

- Individuals should report data theft too.
- If you think your data has been compromised, make sure to tell a parent or trusted adult, they can let the proper authorities know.
- You should also tell the family and friends you communicate with online. This way, they won't open any attachments or click on any links that come from your accounts.

• الأفراد عليهم أيضًا الإبلاغ عن سرقة البيانات. إذا شككت بتعرُّض بياناتك للخطر، احرص على إخبار أحد والدَيك أو شخص بالغ موثوق به؛ إذ يمكنهم إبلاغ السلطات المسئولة.

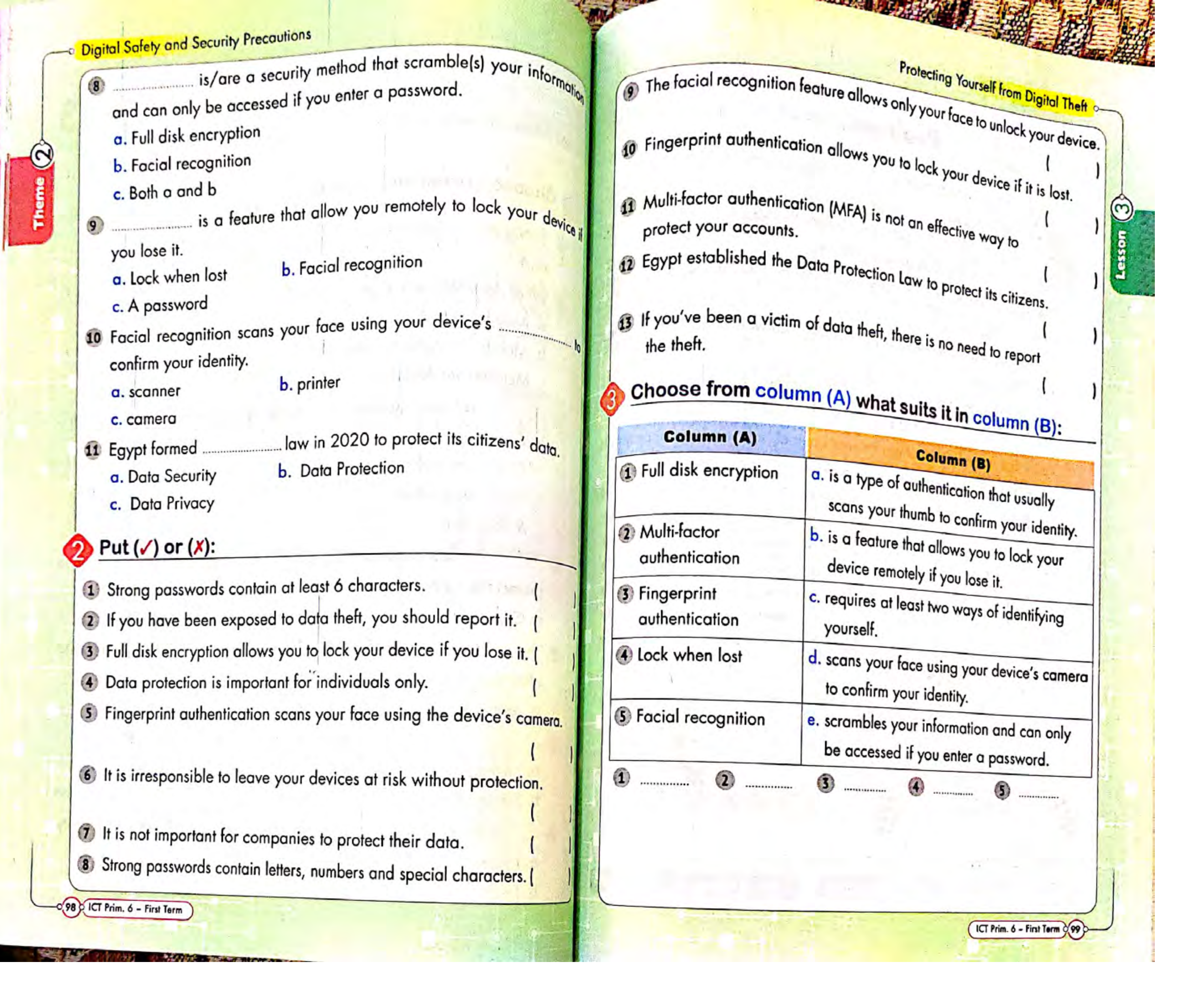
• كما عليك إخبار أُسرتك والأصدقاء الذين تتواصل معهم عبر الإنترنت. وبهذه الطريقة، لن يفتحوا أيَّ مرفقات أو ينقروا على أيِّ روابط تُرسَل من حساباتك الشخصية.



Exercises on Lesson 3

1 Choose the correct answer:

1. Strong passwords contain at least .... characters.
   a. 4 b. 6 c. 8
2. What does MFA stand for?
   a. Multi-function Application
   b. Multi-factor Authentication
   c. Multi-feature Algorithm
3. .... is a type of authentication that uses your fingerprint to confirm your identity.
   a. Fingerprint authentication
   b. Facial recognition
   c. A password
4. .... law requires companies to use strict security standards to protect their data.
   a. Copyright b. E-marketing c. Data Protection
5. The process that scrambles your information and makes it unreadable to others is called ....
   a. decryption b. compression c. encryption
6. .... requires at least two ways of identifying yourself.
   a. Multi-factor authentication
   b. Fingerprint authentication c. Facial recognition
7. .... scans your face using your device's camera to confirm your identity.
   a. Fingerprint authentication
   b. Facial recognition c. Full disk encryption



Theme 2

8. .... is/are a security method that scramble(s) your information and can only be accessed if you enter a password.
   a. Full disk encryption
   b. Facial recognition
   c. Both a and b

9. .... is a feature that allow you remotely to lock your device if you lose it.
   a. Lock when lost
   b. Facial recognition
   c. A password

10. Facial recognition scans your face using your device's .... to confirm your identity.
   a. scanner
   b. printer
   c. camera

11. Egypt formed .... law in 2020 to protect its citizens' data.
   a. Data Security
   b. Data Protection
   c. Data Privacy

2 Put (✓) or (✗):

1. Strong passwords contain at least 6 characters. ( )
2. If you have been exposed to data theft, you should report it. ( )
3. Full disk encryption allows you to lock your device if you lose it. ( )
4. Data protection is important for individuals only. ( )
5. Fingerprint authentication scans your face using the device's camera. ( )
6. It is irresponsible to leave your devices at risk without protection. ( )
7. It is not important for companies to protect their data. ( )
8. Strong passwords contain letters, numbers and special characters. ( )

Lesson 3

9. The facial recognition feature allows only your face to unlock your device. ( )
10. Fingerprint authentication allows you to lock your device if it is lost. ( )
11. Multi-factor authentication (MFA) is not an effective way to protect your accounts. ( )
12. Egypt established the Data Protection Law to protect its citizens. ( )
13. If you've been a victim of data theft, there is no need to report the theft. ( )

3 Choose from column (A) what suits it in column (B):

Column (A)	Column (B)
1. Full disk encryption	a. is a type of authentication that usually scans your thumb to confirm your identity.
2. Multi-factor authentication	b. is a feature that allows you to lock your device remotely if you lose it.
3. Fingerprint authentication	c. requires at least two ways of identifying yourself.
4. Lock when lost	d. scans your face using your device's camera to confirm your identity.
5. Facial recognition	e. scrambles your information and can only be accessed if you enter a password.

1. .... 2. .... 3. .... 4. .... 5. ....

Lesson 4

Internet Safety – Problems and Solutions

» You have learned a lot about online safety choices and strategies. Here is a brief recap.

1. Use safe web browsers, such as Google (Google Chrome).
2. Use antivirus protection on your devices.
3. Keep your pages private, only allow friends and family to view your social media.
4. Do not communicate with people you don't know or who make you feel uncomfortable.
5. Do not share your personal information online.
6. Use strong passwords and change them every three months.
7. Verify that the websites that you frequent are real, safe, and age-appropriate.
8. Verify the information you find to make sure it is accurate.

» لقد تعلّمت الكثير عن إجراءات الأمان على الإنترنت وإستراتيجياته. فيما يلي مراجعة سريعة:

1. استخدِم متصفحات الإنترنت الآمنة مثل جوجل.
2. واستخدام برامج الحماية من الفيروسات على أجهزتك.
3. حافظ على خصوصية صفحاتك، اسمح فقط لأصدقائك وأُسرتك برؤية صفحات التواصل الاجتماعي الخاصة بك.
4. لا تتواصل مع الأشخاص الذين لا تعرفهم أو الذين يجعلونك تشعر بعدم الارتياح.
5. لا تشارك معلوماتك الشخصية على الإنترنت.
6. استخدم كلمات مرور قوية وغيِّرها كل ثلاثة أشهر.
7. تأكّد من أن المواقع التي تتردَّد عليها حقيقية، وآمنة، ومناسِبة لعمرك.
8. تحقَّقْ من المعلومات التي تجدها للتأكُّد من دقتها.



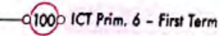


» Here are some common issues and how to solve them:



2 Cyberbullying





1 Hacking

» This is when weaknesses are identified and exploited in a computer system or network to gain unauthorized access to personal or organizational data.



Solutions:

1. Use an antivirus to do a sweep of your computer and remove any viruses.
2. Confirm your security settings are up-to-date.
3. Change your passwords – your device password, email, social media, etc. It is better to change all your passwords, even if you think you have only been hacked on one particular account.

» القرصنة: يحدث ذلك عند اكتشاف ثغرات في نظام كمبيوتر أو شبكة ما واستغلالها للوصول غير المصرَّح به إلى معلومات شخص أو مُنظَّمة ما.

1. استخدِم برنامجًا لمكافحة الفيروسات لمسح الكمبيوتر الخاص بك وإزالة أيِّ فيروسات.
2. تأكَّدْ من أن إعدادات الأمان الخاصة بك مُحدَّثة.
3. غيِّر كلمات المرور الخاصة بك – كلمة المرور الخاصة بجهازك وببريدك الإلكتروني وبمواقع التواصل الاجتماعي... إلخ. ومن الأفضل أن تُغيِّر كل كلمات المرور الخاصة بك، حتى إن كنت تعتقد أن حسابًا واحدًا فقط من حساباتك قد تعرَّض للقرصنة.

If you are exposed to hacking:

1. Let your contacts know. So, they avoid opening anything suspicious.
2. Report the hacking to a trusted adult. They can decide if further action is necessary, such as reporting it to an Internet service provider, or getting the authorities involved.

» في حالة تعرُّضك للقرصنة:

1. أخبِر جهات الاتصال الخاصة بك؛ ليتجنبوا الدخول إلى أيِّ شيء مريب.
2. أبلغ أحد الأشخاص البالغين الموثوق بهم عن تعرُّضك للقرصنة؛ إذ يمكنهم أن يقرروا ما إذا كان اتخاذ إجراءات إضافية ضروريًّا، مثل: الإبلاغ عنه لمقدِّم خدمة الإنترنت، أو إذا كان طلب تدخُّل السلُطات ضروريًّا.

2 Cyberbullying

» Bullying, intimidation, or harassment of any kind is never acceptable.

Solutions:

If you are a victim of cyberbullying or know someone who is being cyberbullied:

1. Do not respond to bullies, but ignore them completely.
2. Delete them from your account and block them.
3. It is helpful to collect evidence to show what has been happening.
4. Screenshot the offensive messages or posts and submit them to the social media site to have them removed.
5. Show a trusted adult.

» التنمُّر الإلكتروني: يُعتبر التنمُّر والتخويف وأيُّ نوع من المضايقة غير مقبول على الإطلاق. إذا كنت ضحية للتنمُّر الإلكتروني، أو تعرف شخصًا يتعرَّض للتنمر الإلكتروني.

1. لا تردَّ على المتنمِّرين، بل تجاهلهم بالكامل.
2. أزِلهم واحظرهم من حسابك.
3. من المفيد أن تجمع الأدلة لإثبات ما كان يحدث.
4. خُذ لقطة شاشة للرسائل أو المنشورات المسيئة، وأرسِلها إلى موقع التواصل الاجتماعي؛ ليزيلوها.
5. اعرض ذلك على شخص بالغ موثوق به.

3 Misleading information

» If someone you know spreads misinformation, let them know—they may not realize they've been doing so.

» If they continue to post misinformation, let a trusted adult know.

» If you find out that information you have shared with others is inaccurate, whether for a school paper or even just sharing information with friends, let them know.

» This way, you stop the spread of misinformation.

» Be careful with what you share in the future.



» **المعلومات المضللة:**

- إذا نشر شخص تعرفه معلومات خاطئة، أخبره بذلك؛ فقد لا يدرك ما يفعله.
- وإذا استمرَّ في نشر المعلومات الخاطئة أخبِر شخصًا بالغًا موثوقًا.
- إذا اكتشفت أن المعلومات التي شاركتها مع الآخرين غير صحيحة، سواء أكان ذلك لورقة بحثية مدرسية أو حتى لمشاركة المعلومات مع الأصدقاء، أخبرهم بذلك. فبهذه الطريقة يمكنك إيقاف انتشار المعلومات الخاطئة.
- كُن حذرًا فيما تشاركه في المستقبل.

The Importance of Cybersecurity in the Internet of Things (IoT)

» Technology, such as Bluetooth speakers, is part of what is known as the Internet of Things (IoT).

» The Internet of Things (IoT) describes physical objects (devices) that have software that can connect to other devices or systems.

» Many of these objects are now being made using green technology, which also helps us to reduce our carbon footprint.

» However, a big issue is cybersecurity—hackers are taking advantage, so it is important to protect smart objects.

» All household items, which are part of the IoT, should be protected the same way any computer device would be protected.

» For extra security, a Virtual Private Network (VPN's) should be used—these protect devices by encrypting your Internet navigation and keeping your IP address private.



- التقنيات مثل مكبرات الصوت بالبلوتوث تعد جزءًا مما يُسمَّى إنترنت الأشياء.
- وهي الأغراض الملموسة التي تتمتع ببرمجية يمكنها الاتصال بأجهزة أو أنظمة أخرى.
- تُصنع الكثير من هذه الأغراض الآن باستخدام تكنولوجيا صديقة للبيئة تساعدنا على الحد من بصمتنا الكربونية. إلا أن الأمن السايبيراني قضية كبرى، فالقراصنة يستغلون هذه الأغراض الذكية؛ وبالتالي من المهم حمايتها. يجب حماية كل الأدوات المنزلية التي تشكل جزءًا من إنترنت الأشياء تمامًا، كما تتم حماية أي جهاز الكمبيوتر وللمزيد من الأمان، يجب استخدام الشبكة الافتراضية الخاصة VPN التي تحمي الأجهزة بتشفير تصفحك الإنترنت، وبإبقاء عنوان بروتوكول الإنترنت الخاص بك سريًا.

Explanatory Information

معلومات توضيحية إضافية خارج الكتاب المدرسي

- **Green technology** is a type of technology that is designed to be more environmentally friendly than traditional technology. This means that it uses less energy, produces less pollution, and has a smaller impact on the environment.
- A **virtual private network (VPN)** is a service that keeps your Internet activity private and secure. When you use the Internet, your device sends information to different websites, and this information can be seen by hackers or companies who want to track what you're doing. But by using a VPN, your Internet activity is hidden and protected, like a secret code that only you and the website you're visiting can see.

Exercises on Lesson 4

1 Choose the correct answer:

1. You should verify information you find online to make sure it is ....
   a. accurate b. reliable c. both a and b
2. Bluetooth speakers are .... devices that use wireless technology.
   a. AI b. IoT c. AR
3. If you shared wrong information, what can you do?
   a. Ignore it. b. Let people know. c. Share more.
4. .... is identifying and exploiting weaknesses in a computer system or network to gain unauthorized access to data.
   a. Cyberbullying b. Misleading information c. Hacking
5. To avoid hacking, keep your security settings ....
   a. weak b. up to date c. unchanged
6. If you are exposed to cyberbullying, it is recommended to .... the bullies.
   a. ignore b. block c. both a and b
7. You should use a/an .... to protect your device and remove any viruses.
   a. firewall b. antivirus c. antihacker
8. If someone you know spreads misinformation, you should ....
   a. let them know b. bully them c. block them
9. VPN protects devices by .... your Internet activities.
   a. encrypting b. hacking c. deleting
10. If you've been hacked on your Facebook account, it is better to change ....
    a. Facebook password b. all accounts passwords c. none of them

11. .... protect(s) devices by encrypting your internet activities and keeping your IP address private.
    a. VPN b. IoT c. both a and b
12. If you are exposed to hacking, you should ....
    a. let your contacts know b. tell a trusted adult c. both a and b
13. .... is/are false or inaccurate information that is/are spread.
    a. Reliable information b. Misinformation c. both a and b
14. Many modern devices are made using .... technology to reduce our carbon footprint.
    a. green b. blue c. red

2 Put (✓) or (✗):

1. It is not necessary to use antivirus on your devices. (   )
2. Bullying, intimidation, and harassment are acceptable behaviors. (   )
3. Google Chrome is considered one of the safest web browsers. (   )
4. You should keep your pages private and limit who can see them. (   )
5. It is important to protect smart devices to avoid hacking. (   )
6. Hacking is an authorized access to personal or organizational data. (   )
7. Using safe web browsers can protect you from hacking. (   )
8. If you are a victim of online bullying, talk to a trusted adult. (   )
9. There is no way to stop the spread of misinformation. (   )
10. It is safe to share your full name, address, and phone number online. (   )
11. If you are exposed to hacking, don't do anything. (   )
12. You should only visit websites that are safe and age-appropriate for you. (   )

13 It is not important to keep your security settings up to date. ( )

14 Even if you've been hacked on one account, change all your passwords. ( )

15 You should only share photos or videos online with people you trust. ( )

16 You have to verify any information you find online. ( )

17 If you are exposed to bullying, you should respond to bullies. ( )

18 Always communicate with strangers, even if they make you feel uncomfortable. ( )

19 Household items which are part of the Internet of Things should not be protected. ( )

20 You should change your passwords every three months to protect your accounts. ( )

3 Complete the following sentences using the words between the brackets:

(hacking – passwords – personal information – VPN – antivirus)

1. Don't share your .... online.
2. .... protects your devices by encrypting your Internet navigation and keeping your IP address private.
3. We use .... to protect our devices from viruses.
4. It's important to change your .... every three months.
5. Opening unsafe links expose you to ....

Lesson 5 Copyright

Let's review what copyright (intellectual property rights) means!

- Copyright: It includes written, visual, audio, video, and web materials.
- Creative Commons: It refers to work that has been granted permission to share by the creator.
- Work in data libraries, such as the (EKB) is already approved for use.
- Public Domain: Egypt considers work public domain if the creator has been deceased for at least 50 years. No creator permission is required.

• لنُراجِع تعريف حقوق الطبع والنشر (الحقوق الفكرية)!
• تشمل حقوق الطبع والنشر: المواد المكتوبة والمرئية والسمعية، ومقاطع الفيديو، والمواد من شبكة الإنترنت.
• «المشاع الإبداعي» يشير إلى الأعمال التي مُنح مبتكرها الإذن بمشاركتها.
• الأعمال الموجودة في مكتبات البيانات، مثل بنك المعرفة المصري، سبق أن تمَّت الموافقة على استخدامها.
• تَعتبِر مصر الأعمال مِلْكًا عامًا إذا كان المؤلِّف متوفيًا منذ ٥٠ عامًا على الأقل، وهذه لا تحتاج إذنًا من المُؤلِّف.

Citing Sources



- National Geographic Explorer Ms. Didi El-Behaedi cites sources and asks for permission before using images or infographics.
- Even if the work has been published with permission to use, sources should still be cited.

• المستكشفة النشطة في ناشونال جيوجرافيك ديدي البيحايدي تُوثِّق مصادر المعلومات وتطلب الإذن قبل استخدام الصور والرسوم التوضيحية. حتى إذا نُشر العمل بإذن للاستخدام، يجب توثيق المصادر.

Common Knowledge • Facts that are readily provable via numerous sources or generally known by the public.

المعرفة العامة هي الحقائق القابلة للإثبات بواسطة مصادر عديدة أو التي يعرفها الناس عامة.

» Common knowledge, discoveries, facts are not copyrightable.

» Someone's expressed opinions via creative work are copyrightable, even if based on common facts.

» For example, a discovery made by Ms. El-Behaedi is not copyrightable, but her own published thoughts and opinions about it are copyrighted.

• المعرفة العامة والاكتشافات والحقائق ليست محمية بحقوق الطبع والنشر.
• إن الآراء التي يعبر عنها شخص ما عبر العمل الإبداعي محمية بحقوق الطبع والنشر، حتى لو كانت مبنية على حقائق مشتركة.
• على سبيل المثال، الاكتشاف الذي قامت به السيدة البهيدي ليس محمي بحقوق الطبع والنشر، ولكنّ أفكارها وآرائها المنشورة حول هذا الموضوع محمية بحقوق الطبع والنشر.

Plagiarism • It is taking someone's work and claiming it as your own.

السرقة الفكرية هي أخذ عمل شخص ما والادّعاء أنه عملك الخاص.

» When someone writes a report using someone else's information, they cannot just copy/paste material they have found without citation, otherwise the original work is plagiarized.

• عندما يكتب شخص ما تقريرًا باستخدام معلومات شخص آخر، لا يمكنهم أن ينسخوا المواد التي وجدوها ويلصقونها من دون توثيق المصادر بشكل مناسب، وإلا سيكون المصدر الأساسي قد تعرَّض للسرقة الفكرية.

Digital Piracy

• It is the distribution or sharing of copyrighted material via devices and internet networks without permission.

• القرصنة الإلكترونية هي توزيع أو مشاركة المواد المحمية بموجب حقوق الطبع والنشر بواسطة الأجهزة وشبكات الإنترنت من دون إذن.

» Egypt has enacted a law that protects content creators from digital piracy.

» For more severe cases of digital piracy, breaking the law can result in fines or even sending to the jail.

• لقد سنّت مصر قانونًا لحماية مبتكري المحتوى من القرصنة الإلكترونية. وفيما يتعلق بالحالات الأكثر خطورة من القرصنة الإلكترونية، فيمكن لخرق القانون أن يؤدي إلى دفع الغرامات وحتى عقوبة السجن.

» Copyright protects creators and gives them ownership of their work.

» Plagiarism and digital piracy prevent creators from getting the acknowledgment they deserve for their work. It can even hurt them financially.

» Committing plagiarism or digital piracy also hurts the offender:

1. It hurts their reputation.
2. It could result in fines or sending to the jail.

• تحمي حقوق الطبع والنشر المبتكرين وتعطيهم حقوق ملكية أعمالهم.
• تمنع السرقة الفكرية والقرصنة الإلكترونية المبتكرين من تلقّي التقدير الذي يستحقونه لقاء أعمالهم، بل ويمكن أن تعرضهم للضرر المادي. إن ارتكاب السرقة الفكرية أو القرصنة الإلكترونية تؤذي المذنب:
❶ تؤذي سمعتهم. ❷ ويمكن أن تؤدي إلى دفع الغرامات أو عقوبة السجن.

Test Yourself

Complete the following:

1. .... are facts that readily provable or generally known by the public.
2. You should .... sources even if the work is published with permission to use.
3. Egypt considers works as public domain after .... years of the creator's death.
4. .... is taking someone's work and claiming it as your own.
5. .... is sharing copyrighted material via internet networks without permission.
6. .... are intelligent, but .... are unintelligent devices

Exercises on Lesson 5

1 Choose the correct answer:

1. .... refers to a work that has been granted permission to share by the creator.
   a. Creative Common   b. Common knowledge   c. Plagiarism
2. In Egypt, works enter the public domain .... years after the creator's death.
   a. 30   b. 40   c. 50
3. Creative works that express opinions are ...., even if they are based on common facts.
   a. copyrightable   b. not copyrightable   c. both a and b
4. It is important to .... before using images or infographics.
   a. cite sources   b. ask for permission   c. both and b
5. Plagiarism and digital piracy hurt ....
   a. creators   b. the offender   c. both a and b
6. A poem written in 1900 is ....
   a. copyrightable   b. not copyrightable   c. both a and b
7. Using someone 's information in a report without .... is plagiarism.
   a. citation   b. authorization   c. payment
8. A book published online in 2024 is ....
   a. copyrightable   b. not copyrightable   c. both a and b
9. Severe cases of digital piracy and breaking the law can result in ....
   a. fines   b. jail time   c. both a and b
10. The .... laws protect printed and digital content.
    a. Creative Commons   b. copyright   c. public domain
11. .... is facts that are provable via numerous sources or generally known by the public.
    a. Misinformation   b. Common knowledge   c. Plagiarism

12. .... is taking someone's work and claiming it as your own.
    a. Creative Commons   b. Common knowledge   c. Plagiarism
13. .... is the distribution or sharing of copyrighted material via devices and internet without permission.
    a. Plagiarism   b. Digital Piracy   c. Citation

2 Put (✓) or (✗):

1. Plagiarism is copying someone else's work as your own. (   )
2. Copyright includes only written and visual materials. (   )
3. You should cite sources if you use other's works. (   )
4. Common knowledge is copyrightable. (   )
5. Plagiarism and digital piracy can hurt creators financially. (   )
6. You can use images or infographics of others without asking their permission. (   )
7. People's opinions are copyrightable. (   )
8. Copyright does not protect creators and does not give them ownership of their work. (   )
9. Works in the public domain requires the creator's permission for use. (   )
10. Digital piracy is sharing non-copyrighted material via the internet networks. (   )
11. In Egypt, works enter the public domain 50 years after the creator's death. (   )
12. Plagiarism and digital piracy hurt creators and the offender too. (   )
13. Plagiarism and digital piracy prevent creators from getting the acknowledgment they deserve. (   )
14. Egypt has established a law that protects content creators from digital piracy. (   )

Theme 2

3 Choose from column (A) what suits it in column (B):

Column (A)	Column (B)
1 Digital piracy	a. protects creators and gives them ownership of their work.
2 Creative common	b. is the distribution or sharing of copyrighted material without permission.
3 Copyright	c. is a work that has been granted permission to share by the creator.
4 Common knowledge	d. taking someone's work and claiming it as your own.
5 Plagiarism	e. facts that known by the public.

1 .... 2 .... 3 .... 4 .... 5 ....

4 Answer the following:

Read the examples below. Are they most likely copyrighted or not?

1. A poem written in 1865.
2. A short story recently published online.
3. A photographer's series of photos published in a magazine.
4. A series of photographs available on the EKB.

Copyrighted ©	Not Copyrighted
....	....
....	....
....	....
....	....

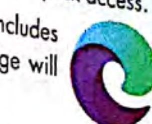
Lesson 6 Using Web Browsers for Research

Microsoft Edge

- Microsoft Edge, Mozilla Firefox, and Google Chrome are popular web browsers.

• مايكروسوفت إيدج وموزيلا فايرفوكس وجوجل كروم هي متصفحات ويب مشهورة.

- Favorites bar: Save websites as a favorite to provide quick access.
- Collections: Keep track of what you find and includes a Citations option, click on this feature and Edge will automatically create a citation for the source.



- Tab groups: Organizes tabs by topic or interest. They can be labeled or colored for easy reference.
- Vertical tabs: Can switch from horizontal tabs to vertical, so they can be viewed and managed as needed.
- OneDrive: Provides direct cloud storage.

مايكروسوفت إيدج

• شريط المواقع الإلكترونية المفضلة: يحفظ المواقع الإلكترونية كمُفضَّلات لتوفير الوصول السريع إليها.

• المجموعات: تحفظ ما تعثر عليه، وتحوي خاصية التوثيق. انقر على هذه الخاصية «المجموعات» وسيُنشئ مايكروسوفت إيدج تلقائيًا توثيقًا للمصدر.

• مجموعات علامات التبويب: تُنظِّم علامات التبويب بحسب الموضوع أو الاهتمام. يمكن وسمها أو تلوينها للرجوع إليها بسهولة.

• علامات التبويب العمودية: يمكن الانتقال من علامات التبويب الأفقية إلى الرأسية؛ لكي تتمكَّن من عرضها والتحكُّم بها بحسب الحاجة.

• ون درايف: يُوفِّر تخزينًا سحابيًا مباشرًا.

Favorite Collections

https://www.google.com

take too much time Favorites

Mozilla Firefox



- Bookmark Tabs: Save websites that are useful as a bookmark to provide quick access.
- Firefox Notes: Allows users to keep notes on any web page visited.
- Firefox Pocket: Can save results (text, audio, or video) here.
- Cite This!: Provides help creating citations for sources.
- Cloud storage: Does not have their own, but allows access to Google Drive and OneDrive.

موزيلا فايرفوكس

- علامة تبويب الإشارة المرجعية: تحفظ المواقع الإلكترونية كإشارات مرجعية لتوفير الوصول السريع إليها.
- اللاحظات من فايرفوكس: تسمح للمستخدمين بالاحتفاظ باللاحظات على أيِّ صفحة ويب يزورونها.
- بوكيت من فايرفوكس: تُحفظ فيه النتائج (النصوص، والمقاطع المسموعة، ومقاطع الفيديو).
- وثِّق هذا!: يُوفِّر المساعدة في إنشاء توثيقات للمصادر.
- التخزين السحابي: لا يملك واحدًا خاصًا به، لكن يسمح بالوصول إلى جوجل درايف وون درايف.

Google Chrome

- Bookmark Tabs: Save websites that are useful as a bookmark to provide quick access.
- Find feature: Use by typing in keywords to search for specific information.
- Google Citation: Can do advanced searches using academic sources and helps create automatic citations of the sources.
- Google Drive: Allows web content to be saved directly to it while browsing.
- Google Keep: Can save web addresses, images, articles, etc. Can also take notes on the content being viewed and adds labels to notes.

جوجل كروم

- علامة تبويب الإشارة المرجعية: تحفظ المواقع الإلكترونية كإشارات مرجعية؛ لتوفير الوصول السريع إليها.
- ميزة البحث: استخدِم هذه الميزة بكتابة كلمات مفتاحية للبحث عن معلومات مُحدَّدة.
- التوثيق من جوجل: يسمح بإجراء أبحاث متقدمة باستخدام مصادر أكاديمية، ويساعدك على إنشاء توثيقات تلقائية للمصادر.
- جوجل درايف: يسمح بحفظ محتوى الويب مباشرة فيه أثناء التصفح.
- جوجل كيب: يمكنه حفظ عناوين الويب، والصور، والمقالات... إلخ. كما يمكنه تدوين الملاحظات على المحتوى المعروض، وإضافة الوسوم إلى ملاحظاتك.

Theme 2

Lesson 6

Accessibility Features:

- All three browsers have inclusive web accessibility features, such as:
  1. Enlarged text options.
  2. Text that is read aloud.
  3. Screen readers that describe screen images.
  4. Voice-to-text features for speaking commands.

All three browsers have protection against threats with:

- Anti-phishing and malware software
- Pop-up blockers
- Privacy options

- These features help users avoid third-party tracking.

- ميزات سهولة الوصول: تشمل متصفحات الويب الثلاثة ميزات سهولة الوصول إلى الويب، مثل:
  1. إمكانية تكبير النص.
  2. النص المقروء بصوت عالٍ.
  3. قارئات الشاشة لتصف الصور.
  4. ميزات تحويل الصوت إلى نص لإعطاء الأوامر المنطوقة.
- تحوي هذه المتصفحات الثلاثة حماية ضد التهديدات مع برامج لمكافحة التصيد الاحتيالي والبرمجيات الخبيثة، ومانعات الإطارات المنبثقة، واختيارات للخصوصية تساعد المُستخدِمين في تجنُّب التعقُّب من الجهات الخارجية.

Test Yourself

Complete the following:

1. ...., ..., and .... are popular browsers.
2. .... provides direct cloud storage in MS Edge.
3. .... helps create citations for sources in Firefox.
4. .... helps create automatic citations for sources in Chrome.
5. Browsers have accessibility features, such as ...., ..., and ....

Exercises on Lesson 6

1 Choose the correct answer:

1. All of the following are web browsers, except ....
   a. Firefox b. Google Chrome c. the EKB
2. .... feature in Firefox allows users to keep notes on any web page visited.
   a. Firefox Notes b. Bookmark Tabs c. Firefox Pocket
3. Bookmark Tabs feature is used to save websites to provide quick access in ....
   a. Google Chrome b. Mozilla Firefox c. both a and b
4. .... save(s) websites as a favorite to provide quick access in MS Edge.
   a. Collections b. Favorites bar c. OneDrive
5. You can save websites as a bookmark in Google Chrome and Mozilla Firefox using ....
   a. Favorites bar b. Bookmark Tabs c. Firefox Notes
6. .... allows web content to be saved directly to it while browsing.
   a. Google Citation b. Google Drive c. both a and b
7. .... keep track of what you find online and includes a Citations option in Edge.
   a. Collections b. Favorites bar c. OneDrive
8. .... is a feature that provides help create citations for sources in Firefox,
   a. Cite This b. Google Citation c. Collections
9. .... can save addresses, images, articles, etc., and can take notes too.
   a. Google Citation b. Google Keep c. Google Drive

10. .... is a cloud storage provided by Microsoft that allows you to store and access your files from anywhere.
    a. Collections b. Favorites bar c. OneDrive
11. The web browser that doesn't have its own cloud storage is ....
    a. Microsoft Edge b. Mozilla Firefox c. Google Chrome
12. It can search academic sources and generate citations automatically in Chrome.
    a. Google Citation b. Google Keep c. Find feature
13. Mozilla Firefox allows access to cloud storages, such as ....
    a. OneDrive b. Google Drive c. both a and b
14. .... organize(s) tabs by topic or interest in Microsoft Edge and can be colored for easy reference.
    a. Tab groups b. Favorites bar c. Collections
15. In Mozilla Firefox, ... allows you to save articles, videos, and other web content.
    a. Firefox Notes b. Favorite bar c. Firefox Pocket

2 Put (✓) or (✗):

1. Mozilla Firefox has its own cloud storage. (   )
2. Microsoft Edge is the only safe web browser. (   )
3. All browsers have a pop-up blockers feature, except Firefox. (   )
4. Google Keep can save web content, take notes, and add labels. (   )
5. Microsoft Edge, Mozilla Firefox, and Google Chrome are popular search engines. (   )
6. Browsers, like Chrome and Edge don't have anti-phishing and malware software. (   )
7. You can't access Google Drive or OneDrive when using Firefox. (   )
8. Microsoft Edge doesn't contain screen readers that describe screen images. (   )
9. Microsoft Edge doesn't provide cloud storage. (   )
10. Web browsers, such as Chrome and Firefox have enlarged text options. (   )

Theme 2

11 You cannot keep notes on any web page you visit in Mozilla Firefox. ( )

12 You can save websites that are useful as a bookmark in Chrome. ( )

13 Chrome doesn't have a voice-to-text feature that lets you speak commands. ( )

14 Collections feature in Microsoft Edge includes automatic citation for sources. ( )

15 Firefox Notes allow users to keep notes on any web page visited. ( )

16 Web browsers have privacy options to protect users' privacy from being tracked. ( )

17 in Microsoft Edge, you can switch from horizontal to vertical tabs and vice versa. ( )

18 Cite This feature provides help creating citations for sources in Microsoft Edge. ( )

19 Microsoft Edge, Mozilla Firefox, and Google Chrome have protection against threats. ( )

3 Choose from column (A) what suits it in column (B):

Column (A)	Column (B)
1 OneDrive	a. provides Cite This! feature that helps creating citations for sources.
2 Voice-to-text feature	b. saves websites as a favorite for quick access in Edge.
3 Pop-up blockers	c. one of the accessibility features in web browsers.
4 Mozilla Firefox	d. provides direct cloud storage.
5 Favorites bar	e. are a protection feature in web browsers.

1 .... 2 .... 3 .... 4 .... 5 ....

Lesson 7 Evaluating Sources

How to Evaluate the Reliability of a Source?

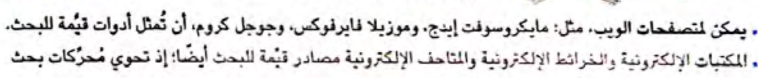
- **Credibility:** Does the author or organization have credibility based on their background and experience?
- **Opinions:** Does the source contain only opinions with little to no factual evidence?
- **Biased:** Is the author biased, or unfairly for or against an idea, when presenting information?
- **Unbiased:** Is the author unbiased, or objective, when presenting information?
- **Relevance:** How current and relevant is the information?
- **Facts and Evidence:** Does the source contain only factual evidence with no opinions?

- المصداقية: هل يتمتَّع المُؤلِّف أو المنظمة بالمصداقية بناءً على خلفيتهما وخبرتهما؟
- الآراء: هل يحوي المصدر آراء فقط مع القليل من الأدلة الواقعية؟
- التحيُّز: هل المُؤلِّف متحيِّز أو غير منصف تجاه أو ضد فكرة معينة عند تقديم المعلومات؟
- عدم التحيُّز: المُؤلِّف غير متحيِّز أو موضوعي أثناء تقديم المعلومات.
- الارتباط بالموضوع: ما مدى حداثة المعلومات وارتباطها بالموضوع؟
- الحقائق والأدلة: هل يحوي المصدر مراجع مُوثَّقة بدون دعم أيِّ رأي؟

Online Research Tools

1. Web browsers, like Microsoft Edge, Mozilla Firefox, and Google Chrome
2. Online libraries, e-maps, and e-museums

- They include specialized search engines and sources that you can review.
- The EKB includes safe and accurate sources.



- يمكن لمتصفحات الويب، مثل: مايكروسوفت إيدج، وموزيلا فايرفوكس، وجوجل كروم، أن تُمثل أدوات قيِّمة للبحث.
- المكتبات الإلكترونية والخرائط الإلكترونية والمتاحف الإلكترونية مصادر قيِّمة للبحث أيضًا؛ إذ تحوي مُحرِّكات بحث متخصِّصة ومصادر خاصة بها يمكنك معاينتها.
- بنك المعرفة المصري يحتوي مصادر موثوقة ودقيقة.



Theme 2

Citing Sources



- It is important to cite your sources whenever you use material from the previous resources.
- Be sure to include the website name and URL in your citation.

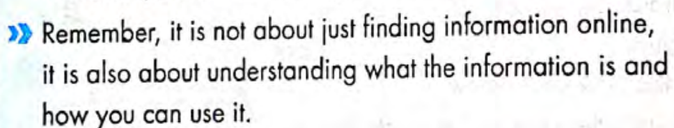
• من المهم أن تذكر (توثق) مصادرك كلما استخدمت مواد من المصادر السابقة.
• احرص على ذِكر اسم الموقع الإلكتروني والرابط الخاص به في توثيقك، متى أمكن ذلك.

Evaluating Sources

- It is important to evaluate the source of the information.
- The source will tell you how reliable the information is and if you can trust the information.
- There are many ways to evaluate the source.

• من المهم أن تُقيِّم مصادر المعلومات؛ إذ سيكشف لك المصدر مدى صحة المعلومات، وما إذا يمكن الوثوق بمصداقيتها أم لا. هناك طُرُق مُتعدِّدة لتقييم المصدر.

- When using a source to support your opinion, position, or argument, make sure it's relevant.
- A source may be credible but not relevant to your message. Therefore, it wouldn't be a good choice.



- Remember, it is not about just finding information online, it is also about understanding what the information is and how you can use it.

• تأكَّد عند استخدام مصدر لدعم رأيك أو موقفك أو حجتك أنه ذات صلة.
• قد يكون المصدر موثوقًا ولكنه غير ذي صلة برسالتك؛ ولذلك لن يكون اختيارًا جيدًا.
• تذكَّر، لا يقتصر الأمر على العثور على المعلومات عبر الإنترنت، بل على فهم ماهيَّة المعلومات وكيفية استخدامها.

Exercises on Lesson 7

1 Choose the correct answer:

1. If the source contains only opinions with almost no facts, it will be a/an .... source.
   a. reliable b. unreliable c. trustworthy
2. Make sure your sources are .... when using them to support your opinion.
   a. relevant b. biased c. interesting
3. .... means that the author is fair, when presenting information
   a. Biased b. Unbiased c. Relevance
4. Be sure to include the .... in your citation.
   a. website name b. URL c. both a and b
5. .... include specialized search engines and sources that you can review.
   a. E-maps b. Online libraries c. both a and b
6. You have permission to copy information from the EKB, but it should .... the original sources.
   a. ignore b. cite c. attach
7. Online libraries, e-maps, and e-museums, include .... search engines.
   a. general b. specialized c. kids
8. Finding information online is also about understanding the .... and how you can use it.
   a. information b. search engine c. opinions

2 Put (✓) or (✗):

1. It is not important to cite your sources. ( )
2. The EKB includes safe and accurate sources. ( )
3. There is only way to evaluate sources. ( )

Theme 2

4. You should cite your sources even if you are allowed to use them. ( )
5. If the information is current and relevant, it is more likely to be reliable. ( )
6. Some sources may be credible, but not relevant to your topic. ( )
7. It is not allowed to use or download materials from the EKB. ( )
8. Evaluating the source of information is not important for determining its reliability. ( )
9. Online libraries, e-maps, and e-museums includes general search engines. ( )
10. It is important to include the website name and URL in your citation. ( )
11. The author or organization should have credibility to ensure the source is credible. ( )
12. When the source is credible and not relevant to your message, it will be a good choice to use. ( )
13. Microsoft Edge and Mozilla Firefox are web browsers, while Google Chrome is a search engine. ( )

3 Choose from column (A) what suits it in column (B):

Column (A)	Column (B)
1 Relevance	a. does the author or organization have credibility based on their background and experience?
2 Unbiased	b. does the author biased, or unfairly for or against an idea, when presenting information?
3 Facts and Evidence	c. does the author is unbiased, or objective, when presenting information?
4 Biased	d. does the information is related to your search?
5 Credibility	e. does the source contain only factual evidence with little to no opinions?

1 .... 2 .... 3 .... 4 .... 5 ....

Lesson 8 Sharing and Evaluating Information

» It's time to use your research to share your thoughts about a social issue.
» Support your opinions with facts from reliable sources to persuade readers.

• لقد حان الوقت لاستخدام بحثك لمشاركة أفكارك حول قضية اجتماعية. عليك دعم آرائك بالحقائق من مصادر موثوقة لإقناع القُرّاء.

Persuasive Writing Tips نصائح للكتابة الإقناعية

1 Be fair!

» If you do not show bias, your opinion will be taken more seriously.
» If you show unfair bias, your opinion may not be taken seriously or trusted.
» Be sure to share another possible side if it is relevant to your social issue.

كُن منصفًا

• إذا لم تُظهر تحيزًا سيُؤخَذ رأيك بجدّية أكبر، إذا شاركت وجهة نظر تُظهر تحيزًا غير منصف، يمكن ألا يؤخذ رأيك بجدية وألا يكون موثوقًا به. احرص على مشاركة رأي آخر مُحتمَل إذا كان يتعلّق بقضيتك المجتمعية.

2 Use your sources!



» Use your researched information to provide relevant, factual support to backup your opinion.
» Be sure to credit your sources properly.
» Be sure your citations include accurate information that can be properly traced back to the source.

استخدِم مصادرك!

• استخدِم المعلومات التي بحثت عنها لتقديم دعم من الواقع مرتبط برأيك.
• احرص على توثيق مصادرك بطريقة صحيحة.
• احرص على أن تتضمن توثيقاتك معلومات دقيقة يمكن تتبُّعها رجوعًا إلى المصدر.

Theme 2

3 Be passionate!

» Showing passion shows that you take the matter seriously and that you are being sincere about your views when presenting.

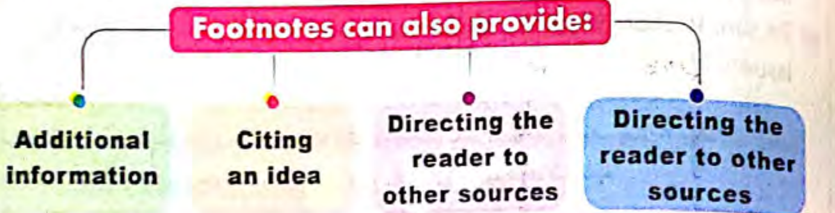
كُن شغوفًا!

إن التحلِّي بالشغف، عند عرض رأيك، يُظهر جديتك حيال الموضوع ومصداقية آرائك.

Footnotes:

» Footnotes are like citations, except they are set at the bottom of each page where ideas are introduced.

» They often include more specific information about what page or location you can find that exact information.



الحواشي السفلية

• تشبه الحواشي السفلية التوثيقات، إلا أنها تُوضَع في أسفل كل صفحة حيث تُقدَّم الأفكار، وغالبًا ما تحوي معلومات أكثر دقة عن الصفحة أو الموقع الذي ستجد فيه هذه المعلومات.

• يمكن أن تُقدِّم الحواشي السفلية أيضًا:

- معلومات إضافية. - توثيق فكرة. - إرشاد القارئ إلى مصادر أخرى. - التوسُّع في القراءات.

[1]Here's the footnote.
[2]Specifically, I'd write comments in this one.

1

Lesson 8

Evaluating information shared by others

» It is important to evaluate the information that others share in the same way you would evaluate the sources you find online.

- Does the writer support opinions with facts?
- Does the writer show bias or fairness?
- What online sources did the writer use? Were the sources cited?
- Review the online sources used and cited. Are the sources reliable?

» Evaluating sources is an important part of being a responsible digital citizen.

» It helps stop the spread of misinformation that can so easily and quickly be shared with others online.

• من المهم تقييم المعلومات التي يُقدِّمها الآخرون كما تقيم المصادر التي تجدها عبر الإنترنت.

- هل يدعم الكاتب الآراء بالحقائق؟
- هل يُظهر الكاتب التحيُّز أم العدل؟
- ما المصادر عبر الإنترنت التي استخدمها الكاتب؟ هل وُثِّقت تلك المصادر؟
- راجع المصادر المُستخدَمة والموثَّقة من الإنترنت. هل المصادر موثوقة؟

• تقييم المصادر جزء مهم من كونك مواطنًا رقميًّا مسئولًا، فذلك يساعد على إيقاف انتشار المعلومات الخاطئة التي يمكن مشاركتها مع الآخرين بسرعة وسهولة شديدة عبر الإنترنت.

Test Yourself

Complete the following:

1. You should support your opinions with .... to persuade readers.
2. Unfair bias may make your opinion ....
3. Footnotes are like ...., except they are set at the .... of each page.
4. .... sources stop the spread of misinformation.



Exercises on Lesson 8

1 Choose the correct answer:

1. The process of providing credit to your sources is called ....
   a. quotation b. citation c. summarizing
2. Footnotes are like .... , except they are set at the bottom of each page.
   a. headings b. quotation c. citations
3. .... is the person who shares information online in a responsible and ethical way.
   a. Digital researcher b. Digital student c. Digital citizen
4. Footnotes are like citations, except they are set at the .... of each page.
   a. top b. bottom c. left
5. Showing .... when presenting, shows that you are being sincere about your views.
   a. passion b. confusion c. fear
6. Checking the accuracy, reliability, and validity of information is called .... information.
   a. searching b. protecting c. evaluating
7. One of the tips for persuasive writing is to ....
   a. be fair b. be passionate c. both a and b
8. The false or misleading information that can be easily shared online is called ....
   a. information b. misinformation c. disinformation
9. .... helps stop the spread of misinformation that can be shared with others.
   a. Evaluating sources b. Summarizing c. both a and b
10. Footnotes are set at the bottom of each page to cite ideas and directing the reader to ....
    a. other sources b. further reading c. both a and b
11. The benefit of evaluating information before sharing it online is ....
    a. it helps stop the spread of misinformation
    b. it helps check the credibility of the source c. both a and b

2 Put (✓) or (✗):

1. Evaluating sources is part of being a responsible digital citizen. (   )
2. If you show bias, Your opinion will be taken seriously. (   )
3. Footnotes help direct the reader to other sources or to cite an idea. (   )
4. It is impossible to stop the spread of false information that can be shared online (   )
5. Footnotes can cite an idea but not provide additional information. (   )
6. It is necessary to cite your sources correctly (   )
7. You should use irrelevant sources to back up your opinion. (   )
8. Footnotes are notes at the top of a page that provide additional information. (   )
9. Being passionate about your opinion indicates that you are serious about it. (   )
10. It's important to evaluate shared information as you would evaluate online sources (   )
11. You should include accurate information in your citations such as the name, and URL. (   )

3 Complete the following sentences using the words between the brackets:

(fair - biased - digital citizen - Footnotes - citations)

1. .... are like citations, except they are set at the bottom of each page.
2. Being .... is one of the persuasive writing tips.
3. Be sure your .... include accurate information to be properly traced back to the source.
4. Evaluating sources is an important part of being a responsible ....
5. If you are .... when presenting your idea, your opinion may not be taken seriously or trusted.

Summary on Theme 2



Lesson 1

- Raghda (Didi) El-Behaedi:
- She is a National Geographic Explorer.
- She is a PhD student in Egyptian Archaeology at University of Chicago.
- She has worked as a remote sensing research consultant at NASA.
- She is the co-director of the Memphis-Kom el-Fakhry Archaeological Project (Egypt).
- she uses geospatial technologies, such as GIS, RS and GPS.
- She's studying how ancient Egyptians dealt with decreasing water in Lake Moeris in Fayum.
- Ms. El-Behaedi uses remote sensors in her work.
- The remote sensors: they are special cameras placed on satellites, drones, and planes that collect electromagnetic radiation reflected from the Earth's surface.
- Ms. El-Behaedi uses machine learning to find unknown archaeological sites
  - Ms. El-Behaedi protect her information by:

Installing an antivirus	Using strong passwords	Backing up data frequently

- The characteristics of Ms. El-Behaedi as an integral scholar:
  1. She learns from other scholars.
  2. She gets information from trusted sources.
  3. She cites sources.
  4. She asks for permission to use other's images or infographics.
- Ms. Didi El-Behaedi prefers to use JavaScript for many reasons:
  1. It works on all computers and mobile phones.
  2. It can be used with other programming languages, such as HTML.
  3. It makes web pages interactive with dynamic content.
- JavaScript was used to build YouTube, Facebook, Amazon.
- El-Behaedi and her team was able to create a great geospatial app called PRISM using JavaScript.



Lesson 2

- Tips to be socially, intellectually, and ideologically responsible citizen online.

1. Socially:
   - Do not share personal information online to avoid hacking, harassment, and bullying.
   - Some behaviors can lead to hurt feelings or legal action, such as bullying, disregarding privacy and Not watching your tone.
2. Intellectually:
   - It's immoral to post others' ideas as your own.
   - Not checking source reliability can spread misinformation.
   - Intellectual misbehavior can discredit you or lead to legal action.
3. Ideologically:
   - It's great to be passionate about a social issue, but some behaviors are not ideologically responsible.
   - This behavior can lead people to distrust your information and lose interest in the issue.

- Tips to be safe online:
  1. Only play games and chat with people you know and trust.
  2. Don't put personal information, online.
  3. Don't use a web cam unless your settings are private.
  4. Always ask adults before you download or click on links
  5. Manage your time responsibly!

Lesson 3

- There are many ways to protect your devices such as:
  1. Passwords: They are 8+ random letters, numbers and symbols.
  2. Multi-Factor Authentication (MFA): It requires at least two ways of identifying yourself.
  3. Fingerprint authentication: It will scan your finger, usually thumb to confirm yourself.
  4. Facial recognition: It will scan your face using the device's camera to confirm yourself.



5 Full Disk Encryption: It scrambles your information and is accessible only with a password on your device.

6 Lock When Lost: It allows your device to lock it if you lose it, usually by logging in to your Google or iCloud account.

- In 2020, Egypt formed the Data Protection Law to protect its citizens.
- It requires companies to use strict security stands to protect their data.
- Companies and individuals should report data theft immediately.

Lesson 4

- Remember online safety choices and strategies, such as:
  1. Use safe web browsers, antivirus, strong passwords changed every 3 months.
  2. Do not share personal information online and protect your privacy.
  3. Do not communicate with people you don't know.
  4. Verify websites are real, safe, and age appropriate.
  5. Verify information you find is accurate or not.

1 Hacking: Unauthorized access to personal or organizational data.

- Solutions:
  1. Use an antivirus software.
  2. Update your security settings.
  3. Change all of your passwords.
- IF you exposed to hacking:
  1. Let your contacts know.
  2. Report the hacking to a trusted adult.

2 Cyberbullying

- Solutions:
  1. Ignore bullies completely.
  2. Block them.
  3. Collect evidences (screenshots).
  4. Show a trusted adult.

3 Misleading information

- Inform the people spreading misinformation, if they continue, tell a trusted adult. This way will stop the spread of misinformation.

- The Internet of Things (IoT): Describes household items which can connect to other devices or systems.
- Green technology is now used to make objects, reducing our carbon footprint.
- For extra security, Virtual Private Network (VPN) should be used.

Lesson 5

- Copyright: It includes written, visual, audio, video, and web materials.
- Creative commons: It refers to work that has been granted permission to share by the creator.
- In Egypt, works enter the public domain 50 years after the creator's death.
- It is important to cite sources and ask for permission.
- Common knowledge: Facts that are provable via numerous sources or generally known by the public.
- Common knowledge is not copyrightable.
- Plagiarism: It is taking someone's work and claiming it as your own.
- Digital piracy: It is the sharing of copyrighted material without permission.
- Plagiarism and digital piracy prevent creators from getting the acknowledgment they deserve for their works, it can even hurt them financially.
- Committing plagiarism or digital piracy also hurts the offender.

Lesson 6

- Microsoft Edge, Mozilla Firefox, and Google Chrome are popular web browsers.

	Microsoft Edge	Mozilla Firefox	Google Chrome
Saving websites	Favorites bar	Bookmark Tabs	Bookmark Tabs
Cloud storage	OneDrive	Does not have their own	Google Drive

Taking notes on content	Collections	Firefox Notes	Google Keep
Citation	Collections	Cite This!	Google Citation

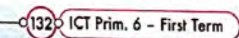
- All three browsers have inclusive web accessibility features.
- All three browsers have protection against threats.

Lesson 7

- You can check the following to evaluate the reliability of a source:
  1. Credibility
  2. Opinions
  3. Biased
  4. Unbiased
  5. Relevance
  6. Facts and Evidence
- Online research tools, such as:
  1. Web browsers
  2. Online libraries, e-maps, and e-museums include specialized search engines.
- Be sure to include the website name and URL in your citation.
- It is important to evaluate the source of the information.
- A source may be credible but not relevant. So not be a good choice.

Lesson 8

- Persuasive writing tips:
  1. Be fair, unfair bias can make your opinion less credible.
  2. Support your opinion with researched, factual information. Credit sources and ensure citations are accurate.
  3. Be passionate, passion shows sincerity and seriousness about your views.
  4. Footnotes, like citations, but they are at the bottom of each page and include specific information about sources, additional information, and further reading.
- Evaluating sources is an important part of being a responsible digital citizen.





1 Choose the correct answer:

1. If you are exposed to cyberbullying, it is recommended to .... the bullies.
   a. ignore   b. block   c. both and b
2. Ms. Didi El-Behaedi has worked as a remote sensing research consultant at.................. .
   a. NASA   b. National Geographic   c. programmer
3. One of the tips for persuasive writing is to ....
   a. be fair   b. be passionate   c. both a and b
4. Strong passwords contain at least .... characters.
   a. 4   b. 6   c. 8
5. .... save(s) websites as a favorite to provide quick access in MS Edge.
   a. Collections   b. Favorites bar   c. OneDrive

2 Put (✓) or (✗):

1. To avoid danger, you should put personal data online. ( )
2. There is only one way to evaluate the sources. ( )
3. Plagiarism and digital piracy hurt creators and the offender too. ( )
4. Collections feature in Microsoft Edge includes automatic citation for sources. ( )
5. Bullying, intimidation, or harassment is acceptable behavior. ( )

3 Choose from column (A) what suits it in column (B):

Column (A)	Column (B)
1 Being fair	a. One of the Accessibility Features in web browsers
2 Pop-up blockers	b. is taking someone's work and claiming it as your own.
3 Voice-to-text feature	c. are facts that known by the public.
4 Plagiarism	d. is one of the persuasive writing tips.
5 Common knowledge	e. are a protection feature in web browsers.

1 .... 2 .... 3 .... 4 .... 5 ....

Model Exam 2

1 Choose the correct answer:

1. Sharing personal information online can lead to ....
   a. safety b. hacking c. both a and b
2. You should use a(an) .... to protect your device and remove any viruses.
   a. firewall b. antivirus c. antihacker
3. .... refers to work that has been granted permission to share by the creator.
   a. Creative Commons b. Common knowledge c. Plagiarism
4. .... feature in Firefox allows users to keep notes on any web page they visit.
   a. Firefox Notes b. Bookmark Tabs c. Firefox Pocket
5. Be sure to include the .... in your citation.
   a. website name b. URL c. both a and b

2 Put (✓) or (✗):

1. JavaScript doesn't work on mobile phones. ( )
2. People's opinions are copyrightable. ( )
3. Footnotes can cite an idea, but not provide additional information. ( )
4. If you show bias, your opinion will be taken seriously. ( )
5. Data protection is important for only individuals. ( )

3 Complete the following sentences using the words between the brackets:

(malware - JavaScript - machine learning - citations - Full disk encryption)

1. Playing online games may expose you to ....
2. You should use .... to refer to others' work in your reports.
3. Ms. El-Behaedi uses .... to find previously unknown archaeological sites.
4. .... makes web pages interactive with dynamic content.
5. .... scrambles your information and can only be accessed if you enter a password

Model Exam 3

1 Choose the correct answer:

1. Not evaluating the sources may lead to the spread of ....
   a. accurate information b. misinformation c. facts
2. Multi-Factor Authentication (MFA) requires at least .... way(s) of identifying yourself.
   a. one b. two c. three
3. A book published online in 2024 is ....
   a. copyrightable b. not copyrightable c. both a and b
4. .... allows web content to be saved directly to it while browsing.
   a. Google Drive b. Google Citation c. both a and b
5. Online libraries, e-maps, and e-museums, include .... search engines.
   a. general b. specialized c. kids

2 Put (✓) or (✗):

1. Good scholars always cite their sources. ( )
2. You should use irrelevant sources to back up your opinion. ( )
3. In Egypt, works enter the public domain 50 years after the creator's death. ( )
4. Ms. El-Behaedi doesn't use artificial intelligence in her work. ( )
5. Evaluating sources is a part of being a responsible digital citizen. ( )

3 Complete the following sentences using the words between the brackets:

(One Drive – Copyright – VPN's – hacking – Creative Commons)

1. .... protects creators and gives them ownership of their work.
2. .... protect devices by encrypting your internet navigation.
3. .... is a work that has been granted permission to share by the creator.
4. Opening unsafe links expose you to.......................... .
5. .... provides direct cloud storage.



1 Choose the correct answer:

1. .... is taking someone's work and claiming it as your own.
   a. Creative Commons b. Common knowledge c. Plagiarism
2. Footnotes are like citations, except they are set at the .... of each page.
   a. top b. bottom c. left
3. Ms. El-Behaedi's team creates geospatial app called PRISM using ....
   a. HTML b. JavaScript c. python
4. .... is a type of authentication that uses your fingerprint to confirm your identity.
   a. Fingerprint authentication
   b. Facial recognition c. Password
5. ....means that the author is fair, when presenting information.
   a. Biased b. Unbiased c. Relevance

2 Put (✓) or (✗):

1. It is not necessary to manage your time responsibly. ( )
2. It is important for companies to protect their data. ( )
3. Hacking is an authorized access to personal or organizational data. ( )
4. You can save websites that are useful as a bookmark to provide quick access. ( )
5. You should not cite your sources if you are allowed to use them. ( )

3 Choose from column (A) what suits it in column (B):

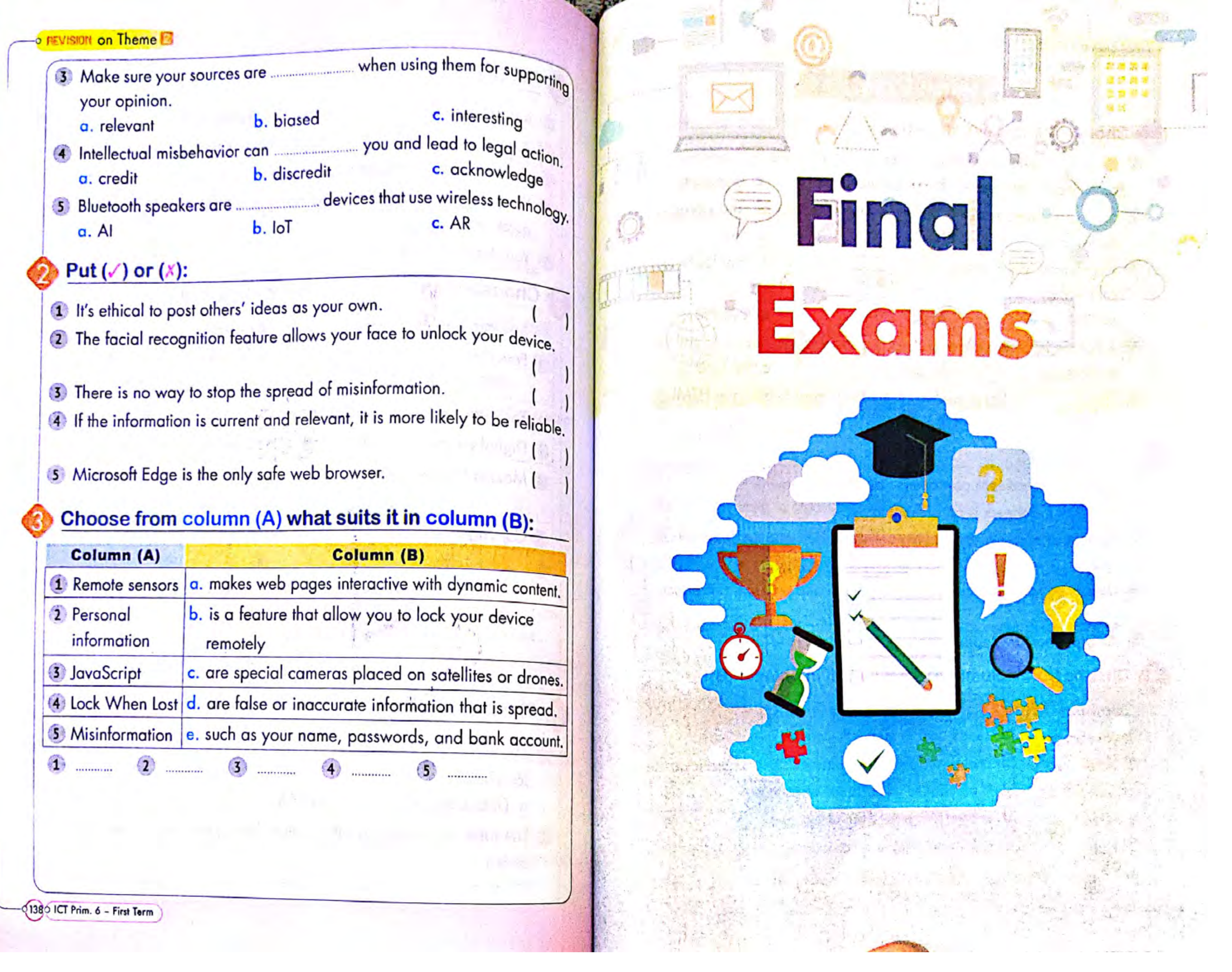
Column (A)	Column (B)
1. Favorites bar	a. provides Cite This! feature that helps creating citations for sources.
2. Footnotes	b. saves websites as a favorite for quick access in Edge.
3. Digital piracy	c. protects printed and digital content.
4. Mozilla Firefox	d. like citations, except they are set at the bottom of each page.
5. Copyright	e. is the sharing of copyrighted material without permission.

1 .... 2 .... 3 .... 4 .... 5 ....

Model Exam 5

1 Choose the correct answer:

1. Ms. El-Behaedi's team creates geospatial app called .... using JavaScript.
   a. Debris Tracker b. NASA c. PRISM
2. The false or misleading information that can be easily shared online is called ....
   a. information b. misinformation c. disinformation



3. Make sure your sources are .... when using them for supporting your opinion.
   a. relevant b. biased c. interesting
4. Intellectual misbehavior can .... you and lead to legal action.
   a. credit b. discredit c. acknowledge
5. Bluetooth speakers are .... devices that use wireless technology.
   a. AI b. IoT c. AR

2 Put (✓) or (✗):

1. It's ethical to post others' ideas as your own. (   )
2. The facial recognition feature allows your face to unlock your device. (   )
3. There is no way to stop the spread of misinformation. (   )
4. If the information is current and relevant, it is more likely to be reliable. (   )
5. Microsoft Edge is the only safe web browser. (   )

3 Choose from column (A) what suits it in column (B):

Column (A)	Column (B)
1 Remote sensors	a. makes web pages interactive with dynamic content.
2 Personal information	b. is a feature that allow you to lock your device remotely
3 JavaScript	c. are special cameras placed on satellites or drones.
4 Lock When Lost	d. are false or inaccurate information that is spread.
5 Misinformation	e. such as your name, passwords, and bank account.

1 .... 2 .... 3 .... 4 .... 5 ....

Final Exams

Model Exam 1

1 Choose the correct answer:

1. .... enables your phone or laptop to create holograms.
   a. Artificial intelligence b. Virtual reality c. Bluetooth
2. .... are computers that have large amounts of data storage.
   a. Switches b. Servers c. Hubs
3. Augmented reality shows a/an .... model of what looks like the real world.
   a. 2D b. 3D c. invisible
4. All of the following are operating systems, except ....
   a. Android b. Linux c. the CPU
5. The .... tag is used to create the largest heading in HTML.
   a. <h1> b. <h6> c. <L1>

2 Put (✓) or (✗):

1. Good digital citizens post others' ideas as their own. ( )
2. Ms. Didi El-Behaedi is an archaeologist. ( )
3. You can learn HTML by viewing online tutorials and YouTube videos. ( )
4. User experience describes how people use and evaluate a product. ( )
5. All browsers have pop-up blockers feature, except Firefox. ( )

3 Choose from column (A) what suits it in column (B):

Column (A)	Column (B)
1 JavaScript	a. sends data to all the devices on the network.
2 Screen readers	b. is a network device that passes data to a specific device.
3 Switch	c. is a dynamic web design languages.
4 HTML	d. is used to create static webpages.
5 Hub	e. help blind people by converting text to audio.

1 .... 2 .... 3 .... 4 .... 5 ....

Model Exam 2

1 Choose the correct answer:

1. Passwords that contain at least 8 characters are ....
   a. useless b. less secure c. more secure
2. A 3D image that you can see without special glasses is called ....
   a. artificial intelligence b. a hologram c. navigation
3. Taha Hussein Library has special .... to convert text into audio.
   a. printers b. scanners c. speakers
4. You can use the shortcut .... to copy text or image in windows.
   a. "Ctrl + C" b. "Cmd + C" c. "Ctrl + X"
5. VPN protects devices by keeping your IP address ....
   a. public b. private c. blocked

2 Put (✓) or (✗):

1. HTML is used to create dynamic web pages. ( )
2. Ports are holes on devices where physical cables are plugged in. ( )
3. Uber app uses artificial intelligence to match riders with available drivers. ( )
4. Anyone can read and modify the code in closed-source software. ( )
5. If you are a victim of online bullying, talk to a trusted adult. ( )

3 Complete the following using the words between the brackets:

(Machine learning – IoT – Plagiarism – Lock when lost – VPN)

1. .... is taking someone's work and claiming it as your own.
2. .... protects your devices by encrypting your internet navigation.
3. .... is a type of artificial intelligence.
4. .... allows you to lock your device if it is lost.
5. .... are household items that can be a part of a network.

Model Exam 3

1 Choose the correct answer:

1. Kartik Sawhney's studies focused on ....
   a. human-computer interaction b. artificial intelligence c. both of them
2. .... is an open-source software for building robot applications.
   a. iOS b. ROS c. Android
3. .... confirms your identity by scanning your thumb.
   a. Fingerprint authentication b. Facial recognition c. A password
4. A .... is a computer which provides services to other computers.
   a. server b. network c. switch
5. Copying information from the EKB is allowed, but it should .... the sources.
   a. ignore b. cite c. plagiarize

2 Put (✓) or (✗):

1. HTML tags have three main parts. ( )
2. The integral scholar shouldn't learn from other scholars. ( )
3. Computers can learn by analyzing the provided examples. ( )
4. Hubs are intelligent devices, but switches are unintelligent. ( )
5. Evaluating sources helps in spreading misinformation. ( )

3 Choose from column (A) what suits it in column (B):

Column (A)	Column (B)
1 Evaluating sources	a. covers only one subject such as business or law.
2 Creative Commons	b. protects printed and digital content.
3 Subject database	c. provides a cloud storage.
4 OneDrive	d. means creators give permission to share their works.
5 Copyright law	e. is important to stop the spread of misinformation.

1 .... 2 .... 3 .... 4 .... 5 ....

Model Exam 4

1 Choose the correct answer:

1. The .... runs a computer's software and hardware.
   a. operating system b. CPU c. hardware
2. Sharing personal information online can lead to ....
   a. bullying b. hacking c. both a and b
3. "The Miracle Child" Rania Saleh, is a talented .... with Down Syndrome.
   a. doctor b. explorer c. programmer
4. A poem written in 1900 is ....
   a. copyrightable b. not copyrightable c. both a and b
5. Wired networks connect devices using ....
   a. Wi-Fi b. radio waves c. cables

2 Put (✓) or (✗):

1. It is important to balance between online and offline activities. ( )
2. Kartik Sawhney doesn't receive any awards for his work. ( )
3. If you are a victim of data theft, there is no need to report the theft. ( )
4. The big issue in the Internet of Things is cybersecurity. ( )
5. There is no difference between footnotes and citations. ( )

3 Complete the following using the words between the brackets:

(Dynamic – Taha Hussein Library – digital citizen – Footnotes – Ports)

1. A .... uses the internet in a responsible and ethical way.
2. .... has special scanners that convert printed text into audio.
3. .... are placed at the bottom of each page.
4. .... web pages can be created using JavaScript and PHP.
5. .... connect computers with input and output devices.

Model Exam 5

1 Choose the correct answer:

1. Mr. Kartik Sawhney uses technology to empower ....
   a. people of determination b. computer engineers c. students
2. .... scans your face using the device's camera to confirm your identity.
   a. Fingerprint authentication b. Facial recognition c. Full disk
3. .... is an open-source operating system for mobile devices.
   a. Android b. iOS c. macOS
4. Bookmark Tabs feature is used to save websites to provide quick access in ....
   a. Google Chrome b. Mozilla Firefox c. both a and b
5. .... are/is special cameras placed on satellites or drones to collect electromagnetic radiation.
   a. GPS b. Remote sensors c. Radars
6. To make the text bold in HTML, you can use the .... tag.
   a. <bold> b. <strong> c. <s>
7. The process of providing credit to your sources is called ....
   a. quotation b. citation c. summarizing

2 Put (✓) or (✗):

1. Without 3D glasses, holograms will look like 2D images. ( )
2. Routers work as gateways that connect your device to an ISP. ( )
3. It is a responsible behavior to leave your devices at risk without protection. ( )
4. Machine learning is a type of artificial intelligence. ( )
5. Copyright includes only books, music, and videos. ( )
6. In HTML, the <i> tag is used to display text in italics. ( )
7. Linux is the most popular operating system all over the world. ( )
8. E-readers are mainly used to surf the web and check email, like PCs. ( )

Model Exam 6

1 Choose the correct answer:

1. Suggestions for videos on YouTube are considered an example of ....
   a. virtual reality b. remote sensing c. machine learning
2. Sharing your friend's photos without their permission is a/an .... behavior.
   a. responsible b. irresponsible c. safe
3. .... is taking someone's work and claiming it as your own.
   a. Creative Commons b. Common knowledge c. Plagiarism
4. Mr. Sawhney cofounded the .... platform to help people of determination.
   a. I-Access b. I-Stem c. I-Determination
5. .... simulates a 3D environment for users to explore and interact as if it were reality.
   a. Virtual reality b. Artificial intelligence c. Assistive technology

2 Put (✓) or (✗):

1. Egypt established the Data Protection Law to protect its citizens. ( )
2. The ability of a machine to think and learn is called AR. ( )
3. Intellectual misbehavior can harm your reputation and result in legal action. ( )
4. All Google search results are accurate and reliable. ( )
5. Small screens can make viewing complex graphics difficult. ( )

3 Complete the following using the words between the brackets:

(AI – Common knowledge – digital piracy – Holograms – Wired networks)

1. .... connect devices using physical cables.
2. The sharing of copyrighted materials via the internet is called ....
3. .... is a machine's intelligence that can be used to solve problems.
4. .... are 3D image that you can see without special equipment.
5. .... is facts that are provable or generally known by the public.

Model Exam 7

1 Choose the correct answer:

1. .... are group of people or things that are connected to each other.
   a. Servers b. Networks c. Hubs
2. Ms. Didi El-Behaedi is a/an .... at National Geographic.
   a. explorer b. computer expert c. programmer
3. The newest version of service or product is called .... technology
   a. assistive b. cutting edge c. virtual
4. .... is a closed-source operating system for mobile devices.
   a. Android b. Apple iOS c. Windows
5. .... platform helps the visually impaired read digital texts.
   a. The EKB b. Google c. istemai.com
6. .... is a cloud storage provided by Microsoft for accessing files anywhere.
   a. Collections b. Favorites bar c. OneDrive
7. When searching online, make sure the information you get is ....
   a. biased b. unbiased c. unreliable
8. .... empower deaf people to translate their signs to spoken or text output.
   a. Hearing aids b. Smart glasses c. Smart gloves
9. Footnotes are like.........., except they are set at the bottom of each page.
   a. headings b. quotation c. citations
10. To create smallest heading in HTML, use the .... tag.
    a. <h1> b. <h6> c. <S1>
11. An/A .... software means that it can't be seen or changed by the public.
    a. open-source b. closed-source c. both of them
12. .... is a feature that allows you remotely to lock your device if you lose it.
    a. Lock when lost b. Facial recognition c. A password
13. .... database covers only one subject, such as business or law.
    a. General b. Subject c. Electronic
14. Complicated and hard-to-use products result in .... user experiences.
    a. positive b. negative c. neutral
15. Visually impaired people can use .... to see their family members up close.
    a. augmented reality b. artificial intelligence c. hearing aids

Model Exam 8

1 Choose the correct answer:

1. Word prediction in smartphones is an example of ....
   a. virtual reality b. augmented reality c. artificial intelligence
2. .... technology reduces our carbon footprint on modern devices.
   a. Green b. Blue c. Red
3. To use images, videos, or infographics of someone, you should ....
   a. ignore the owner b. share without permission c. ask for permission
4. E-reader is a mobile device that is mainly used for ....
   a. reading books b. watching videos c. check emails
5. .... is an example on dynamic web design languages.
   a. JavaScript b. PHP c. both of them

2 Put (✓) or (✗):

1. You should use weak passwords to protect your data. ( )
2. Kartik Sawhney studies Computer Science and focuses on AI. ( )
3. Without HTML tags, a screen reader stops after every element. ( )
4. Some believe that easy access to information may decrease thinking skills. ( )
5. macOS is the operating system used by 90% of the world's computers. ( )

3 Choose from column (A) what suits it in column (B):

Column (A)	Column (B)
1 MFA	a. is a platform supports people of determination.
2 I-Stem	b. provide clear images of the ground's surface.
3 VR headset	c. requires at least two ways of identifying yourself.
4 remote sensors	d. is an operating system for Apple computers.
5 macOS	e. is used to experience virtual reality.

1 .... 2 .... 3 .... 4 .... 5 ....

Model Exam 9

1 Choose the correct answer:

1. .... refers to the sources you used in your report.
   a. Opinion b. Citation c. Assumption
2. .... converts the digital text into audio to help blind people.
   a. Brille terminal b. Screen reader c. Screen magnifier
3. .... is a feature that helps create citations for sources in Firefox.
   a. Cite This b. Google Citation c. Collections
4. .... scrambles your data and requires a password to access it.
   a. Full disk encryption b. Facial recognition c. both a and b
5. .... identifies and exploits system weaknesses to gain unauthorized access to data.
   a. Cyberbullying b. Misleading information c. Hacking

2 Put (✓) or (✗):

1. Egypt has enacted a law against digital piracy. ( )
2. Kartik Sawhney earned his Master's degree from Harvard University. ( )
3. AI is a machine's intelligence that can be used to solve problems. ( )
4. It is important to balance between online and offline activities. ( )
5. Strong passwords contain letters, numbers, and special characters. ( )

3 Complete the following using the words between the brackets:

(hacking - Facial recognition - Unbiased - citations - Egyptian Archaeology)

1. .... means that the author is fair, when presenting information.
2. Online gaming can be fun but may expose you to ....
3. Ms. El-Behaedi is studying to earn a PhD in ....
4. .... scans your face using your device's camera to confirm your identity.
5. Footnotes are like ...., except they are placed in each page.

Model Exam 10

1 Choose the correct answer:

1. Mr. Kartik Sawhney is a ....
   a. National Geographic Explorer
   b. computer expert c. both of them
2. A cardboard VR headset is a/an .... way to experience VR using smartphone.
   a. expensive b. inexpensive c. difficult
3. The HTML tag that is used to create a paragraph is ....
   a. <h> b. <a> c. <p>
4. .... networks connect devices using radio waves.
   a. Wired b. Wireless c. Both of them
5. If you are exposed to hacking, you should ....
   a. let your contacts know b. tell a trusted adult c. both a and b

2 Put (✓) or (✗):

1. Mr. Sawhney develops apps to help people of determination. ( )
2. Strong passwords contain at least 6 characters. ( )
3. Studying the solutions to past problems helps solve future problems. ( )
4. Using someone else's work without citation is called creative commons. ( )
5. Common knowledge is copyrightable. ( )

3 Complete the following using the words between the brackets:

(Smartgloves - Wireless network - Assistive technology - <a> - modem)

1. .... helps people of determination in their daily works.
2. .... is a tag that is used to create a hyperlink in HTML.
3. .... connect devices without wiring by using radio waves.
4. .... translate sign language to spoken or text output.
5. The .... converts the signal from an ISP into a digital signal.

Model Exam 11

1 Choose the correct answer:

1. You can create a website using ....
   a. programming languages b. platforms c. both of them
2. .... is/are collections of information stored in a computer system.
   a. Search results b. Databases c. Software
3. If someone you know spreads misinformation, you should ....
   a. let them know b. bully them c. block them
4. The most popular operating system for mobile worldwide is ....
   a. Windows b. Android c. Apple iOS
5. To make the images accessible on web pages, add .... to <img> in HTML.
   a. alt-text b. meta c. title
6. .... is used to build YouTube, Facebook, and Amazon.
   a. Swift b. JavaScript c. Scratch
7. In Egypt, works enter the public domain .... years after the creator's death.
   a. 30 b. 40 c. 50

2 Put (✓) or (✗):

1. The EKB includes safe and accurate sources. ( )
2. Smartphones and tablets are forms of computers. ( )
3. You can press "Ctrl + C" to cut text or an image in Windows. ( )
4. It is responsible behavior to download copyrighted music or movies for free. ( )
5. Virtual reality allows you to explore world museums from home. ( )
6. Digital piracy is the sharing of non-copyrighted material via internet networks. ( )
7. Mobile devices decrease attention spans through easy access to information. ( )
8. You should change your passwords every three months to protect your accounts. ( )

Model Exam 12

1 Choose the correct answer:

1. .... are electronic devices that create, process, and store information.
   a. Computers b. Routers c. Switches
2. The remote sensors are special .... placed on satellites, drones, and planes.
   a. computers b. cameras c. microphones
3. If the product is practical and meets customer needs, the user experience will be ....
   a. positive b. negative c. neutral
4. With HTML tags, a screen reader .... after every element in the web page.
   a. repeats b. stops c. continues
5. .... law requires companies to use strict security stands to protect their data.
   a. Copyright b. E-marketing c. Data protection
6. If you've been hacked on your Instagram account, it is better to change ....
   a. Instagram password b. all accounts passwords c. none of them
7. Severe cases of digital piracy and breaking the law can result in ....
   a. fines b. jail time c. both a and b

2 Put (✓) or (✗):

1. Mozilla Firefox has its own cloud storage. ( )
2. Hubs allow wireless devices to connect to a network. ( )
3. Egypt launched several initiatives to empower people of determination. ( )
4. General databases provide information on a specific topic. ( )
5. To be safe online, chat and play games with people you know and trust. ( )
6. It is not important to keep your security settings up-to-date. ( )
7. If you think your data has been compromised, it is important to tell your parent. ( )
8. Being passionate about your idea indicates that you are serious about it. ( )

Model Exam 13

1 Choose the correct answer:

1. Checking the accuracy, reliability, and validity of information is called .... information.
   a. evaluating b. protecting c. searching
2. .... include specialized search engines and sources that you can review.
   a. e-maps b. Online libraries c. Both a and b
3. VPN's protect devices by keeping your .... private.
   a. school address b. IP address c. home address
4. The shortcut used in macOS to paste text or image is ....
   a. Cmd + V b. Ctrl + V c. Ctrl + P
5. Downloading or clicking on links to products may expose you to ....
   a. malware b. hidden charges c. both a and b
6. To see web page alt-text, right click on an image and select ....
   a. open b. inspect c. properties
7. HTML is .... with all the major web browsers.
   a. compatible b. incompatible c. irrelevant

2 Put (✓) or (✗):

1. It is not allowed to download materials from EKB. (   )
2. Google Keep can save web content, take notes, and add labels. (   )
3. Works in the public domain require the creator's permission for use. (   )
4. Mobile devices can extend the learning of students outside of the classroom. (   )
5. One of the goals of assistive technology is to improve someone's independence. (   )
6. Programming languages are usually closed source. (   )
7. Geospatial technologies assist in the geographic mapping and analysis of human societies. (   )
8. Virtual reality is a simulated 2-D environment that allows users to interact with their surroundings. (   )